

LARGE SYSTEMS
REQUIREMENTS
IN SWITZERLAND

A CUSTOM STUDY
FOR
NATIONAL ADVANCED
SYSTEMS (EUROPE)
CORPORATION

BY
INPUT LIMITED

APRIL 1984



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I. SAMPLE

A. ORGANISATIONS INTERVIEWED

- o Seven organisations were interviewed and are listed with their classifications in in Exhibit SI-1.

- The distribution by CPU manufacturers was as follows:

. Amdahl	22.2%	(2)
. IBM	66.7%	(6)
. NAS	11.1%	(1).

- The equipment distribution is shown in Exhibit SI-2.

- o 'Other' vendors refers to disk or tape manufacturers such as CDC, Memorex, STC and BASF.
- o Two respondents had dual vendor CPUs, IBM and Amdahl in both cases.

B. METHODOLOGY

- o Of the seven interviews, five were conducted in person and two by telephone.

EXHIBIT SI-1

ORGANISATIONS INTERVIEWED

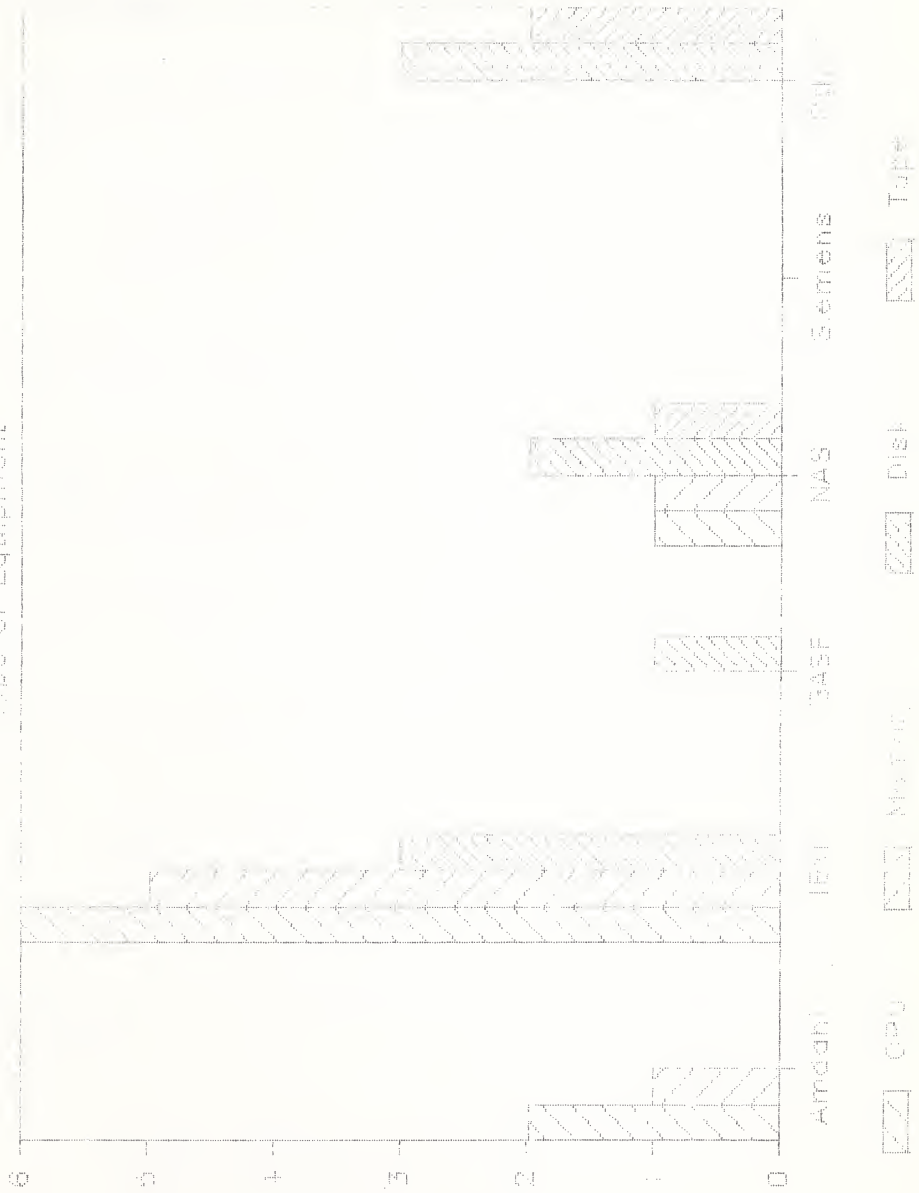
DOW CHEMICAL	NAS
SCHWEITZER KREDITANSTALT	IBM/AMDAHL
ZURICHER KANTONALBANK	IBM
CO-OP SCHWEIZ	IBM
BUHRLE-OERLIKON	IBM/AMDAHL
CIBA-GEIGY	IBM
SWISSAIR	IBM

CATEGORY OF SAMPLE

Financial	2
Manufacturing	3
Service	1
Transport	1

Exhibit 31.2

Type of Equipment



II. EXECUTIVE SUMMARY

A. KEY CONCLUSIONS

- o The three most important purchasing criteria identified by respondents were:

- . Reliability
- . Availability
- . Quality.

In all three of these areas, NAS rated badly when compared to IBM, Amdahl and the 'target' set by users.

- o Performance was also highlighted as being significant and again NAS rated poorly, being well below target (actual 8.0 against target 9.3) and worse than all other vendors.

- o NAS is also rated worst of all vendors for post-sales effort.

- o On the positive side, NAS is well regarded in a number of areas:

- . Compatibility
- . Upgradeability
- . Quality of salesmen
- . Price/performance.

- o Respondents were asked for their perceptions of each vendor in seven key areas:

- . Product range
- . Product performance
- . Product reliability
- . Price
- . Company image
- . Marketing strength
- . Quality of personnel.

- o NAS was rated behind IBM in all areas, and behind Amdahl in respect of product range, reliability, company image and marketing strength.
- o NAS is rated well against both Siemens and BASF, except in the vital area of product reliability where NAS is perceived to be the worst of all vendors.
- o Loyalty is moderate for all vendors in that respondents said that they would consider changing to another vendor. The key requirements for a change are: improved price/performance, improved service, improved cost effectiveness and the provision of a complete solution for users.

B. RECOMMENDATIONS

- o It is important in this market to recognise IBM's position. They are generally well regarded by their own users and again are extremely well perceived by the market in general. Amdahl, too, are well regarded.
- o The two weaker vendors in relation to NAS are BASF and Siemens. As these two competitors are of limited significance compared to IBM, NAS must address their points of weakness relative to IBM.
- o The three key areas of reliability, availability and quality should be checked, to ensure that performance matches that of IBM and Amdahl.

Reliability in particular should be checked as not only is actual performance below target, but NAS equipment is perceived to be less reliable than that of all other manufacturers (Exhibit S3-33).

III. STUDY FINDINGS

A. LOYALTY

1. LOYALTY FACTORS AND REASONS

- o Loyalty factors and rationale are shown in Exhibits S3-1 and S3-2. There is little difference in loyalty to a specific vendor. Only IBM rates marginally (4.1 against 4.0) above other suppliers.

This means that users, although loyal to their supplier, will always consider other vendors' quotes for new procurements.

- o The most common reason given for loyalty is company policy (42.9% of cases). Dependability, cost effectiveness and the maintenance of established relationships were also mentioned. Two respondents also mentioned product reliability and vendor stability as being important.
- o Exhibits S3-3 and S3-4 show the relationship between loyalty to the vendor company and loyalty to the product.
 - The balance comes down marginally on loyalty to the product being more important than loyalty to the vendor.
 - 3 respondents classed their loyalty as 50% to the company and 50% to the product, whereas the other 4 respondents split their loyalty 25% to the company and 75% to the product.
- o The specific reasons quoted for this loyalty were experience, consistency and company policy.

2. PLEASURES AND IRRITANTS WITH PRODUCTS AND VENDORS

- o Exhibits S3-5 to S3-8 summarise users' feelings towards their vendors and products.

Exhibit 53-1

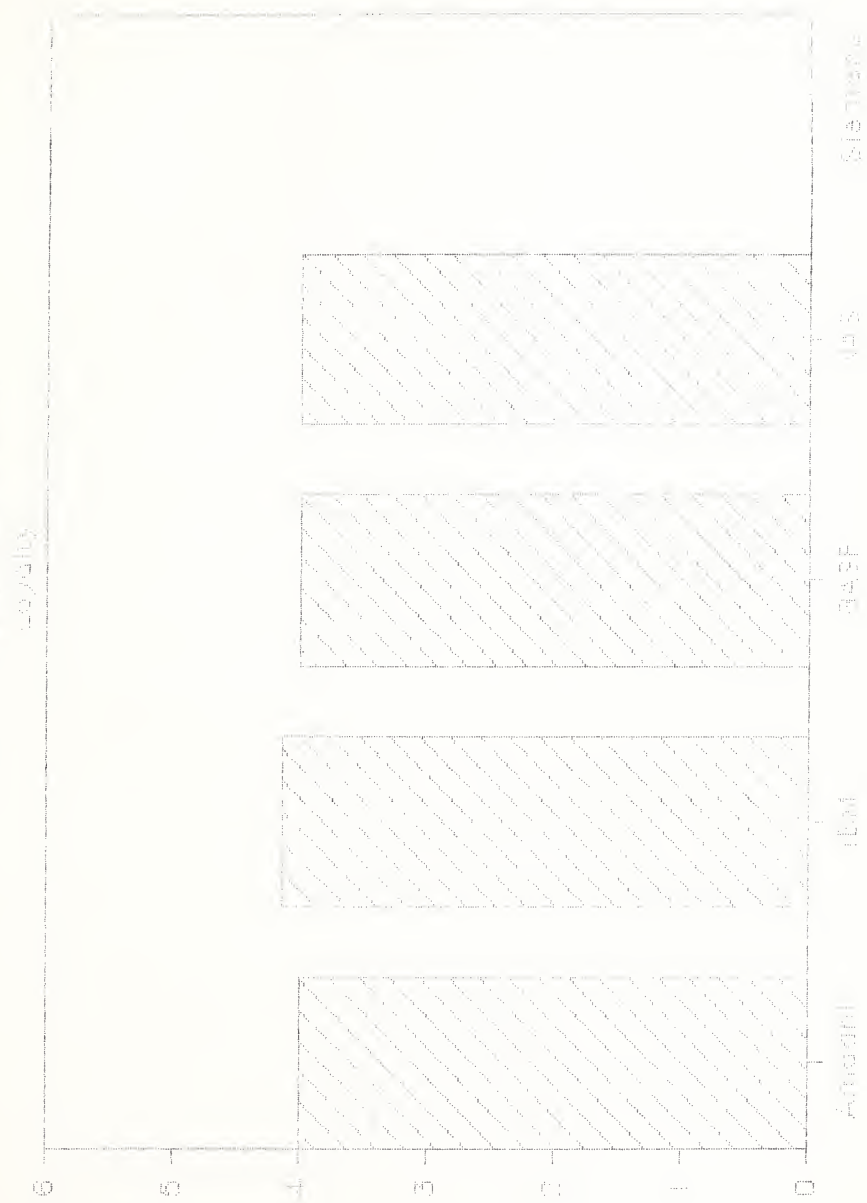


Exhibit S3-2

Reasons for Loyalty

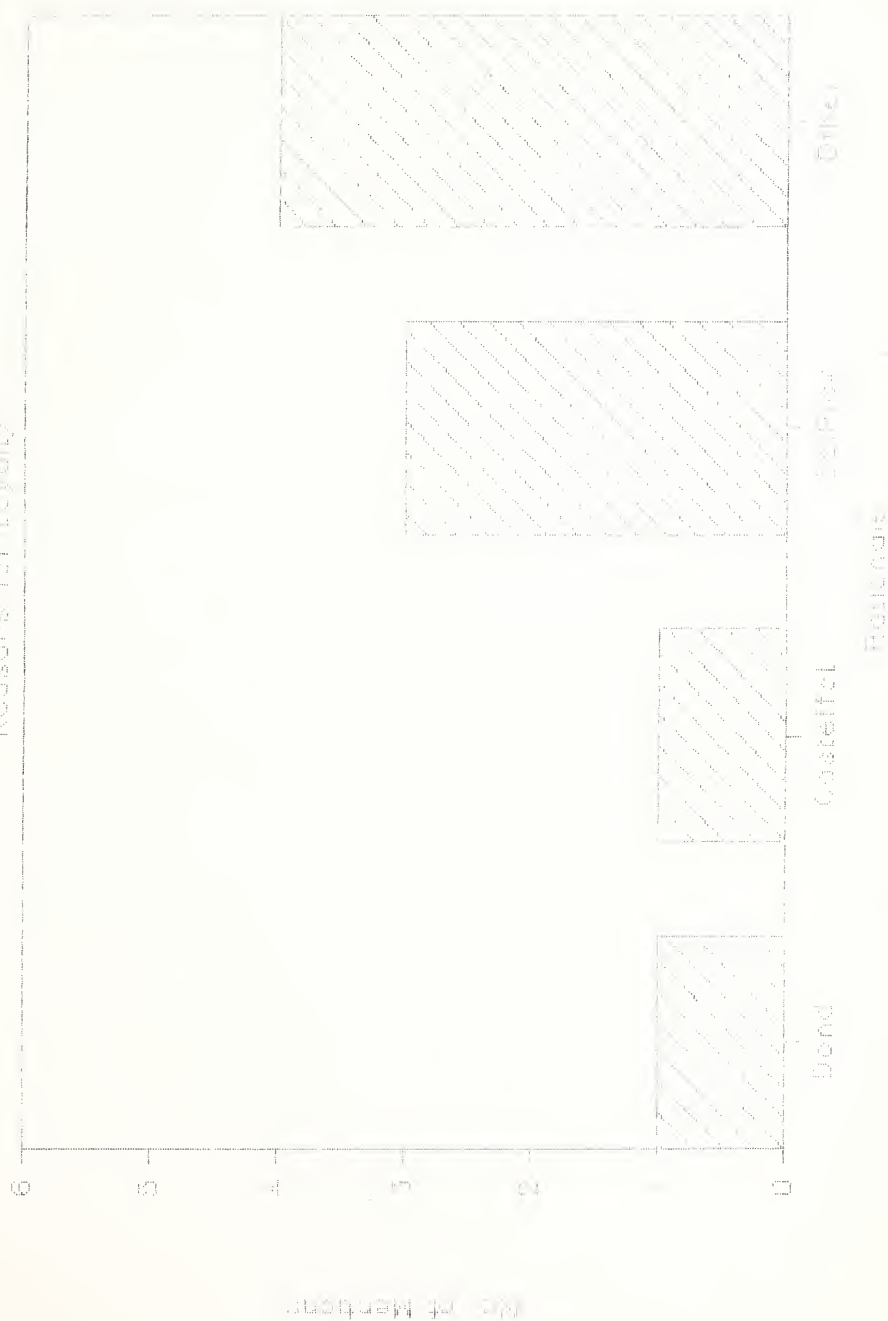


Exhibit S5-3

Company versus Product Loyalty

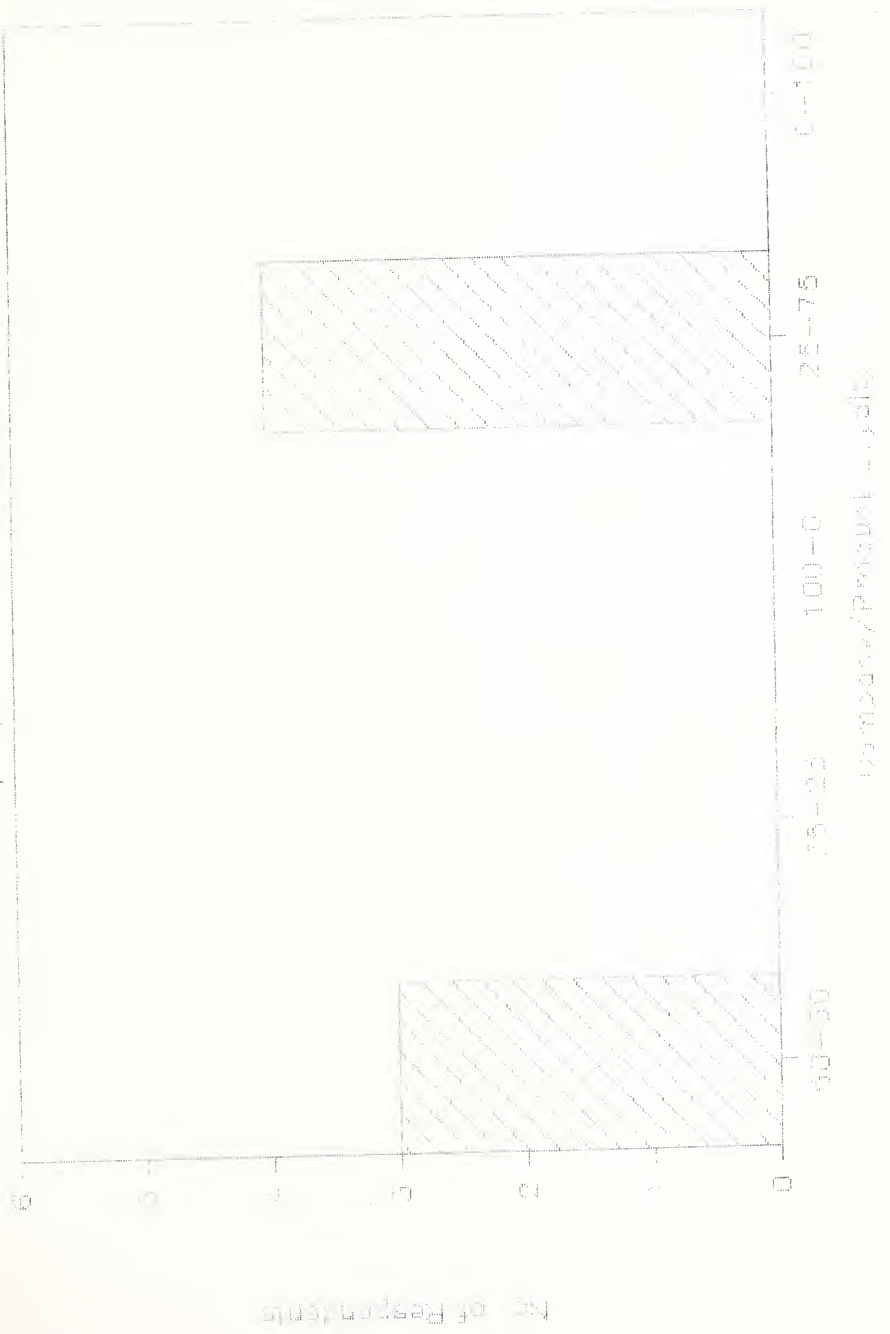


Exhibit 32-4
Rationale for Company/Product Loyalty

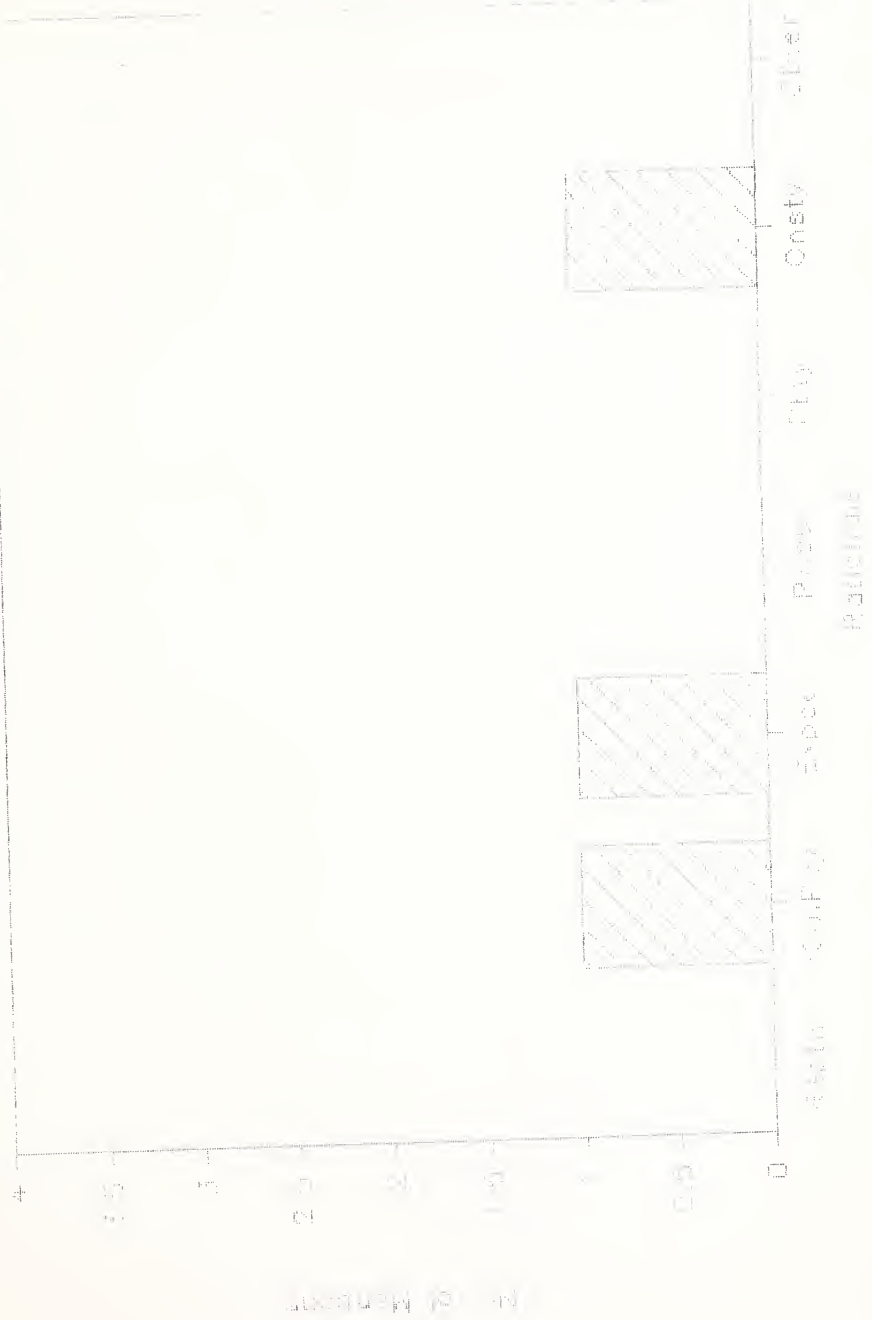


Exhibit 33-1

Number of Mentions

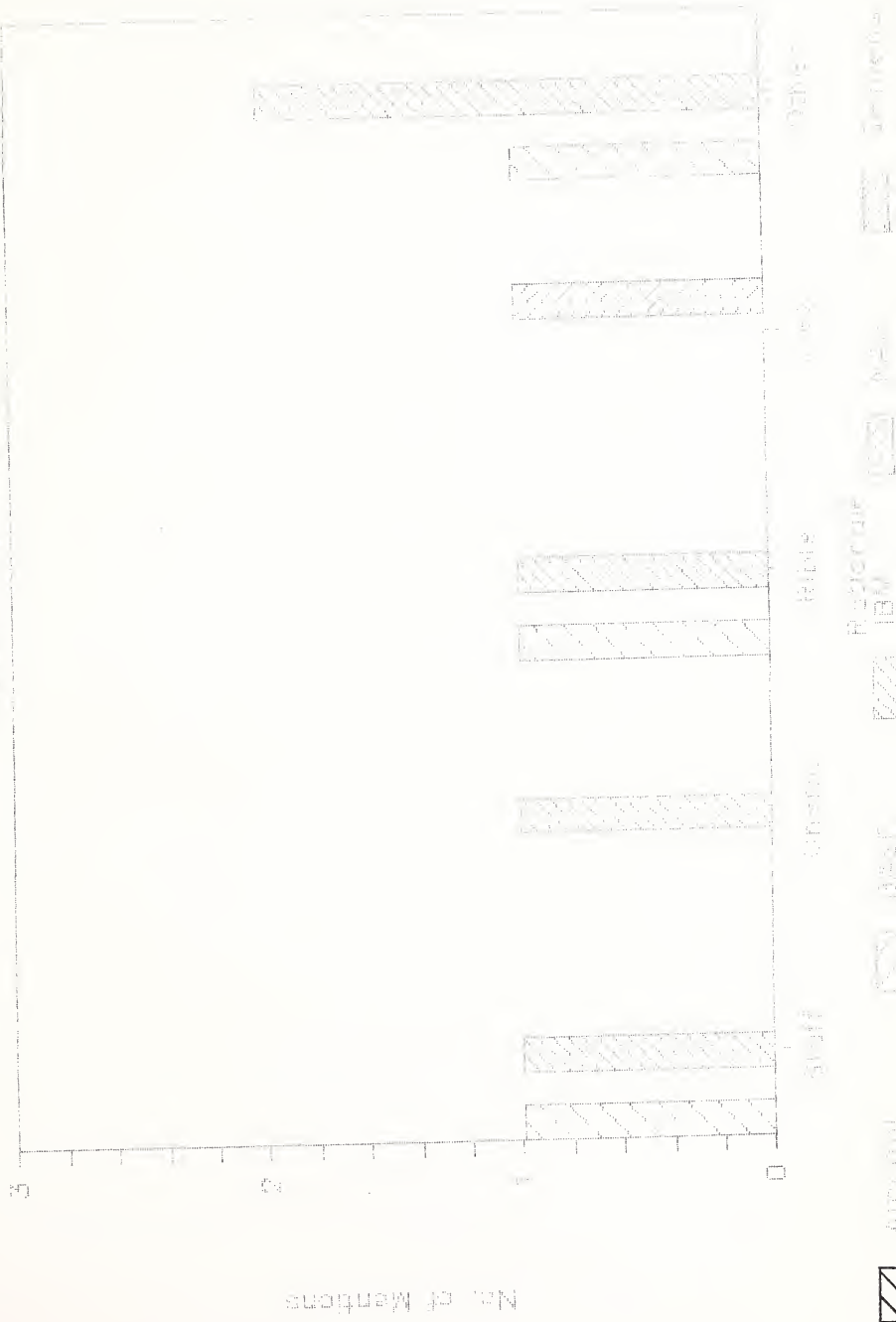
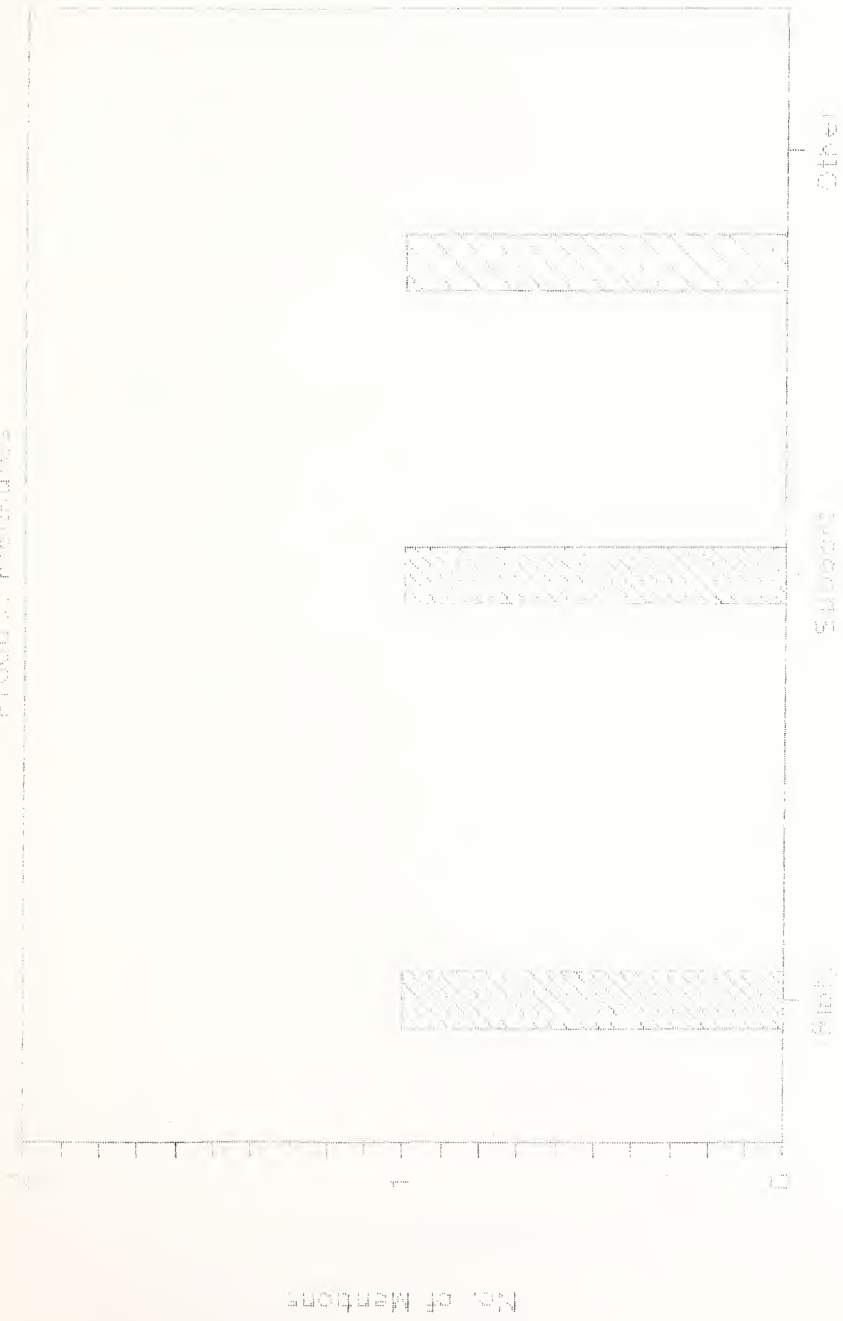


Exhibit 33-B

Product of Phenyls



- NAS attracted only one mention, a favourable comment about flexibility.
- IBM were praised for their skilled staff, consistency, reliability, image and stability.
- Amdahl received favourable comments about their skilled staff, reliability and corporate image.
- As far as products are concerned, IBM were complimented for reliability and good support, and Amdahl for availability.
- IBM were criticised for variable support, delivery delays and communication with customers. Two respondents also expressed concern about IBM's monopoly position and their users' dependence upon them.
- IBM software was criticised and one respondent commented upon the difficulty of interfacing between IBM and PCMs.

3. BUSINESS RELATIONSHIPS

- o Exhibit S3-9 indicates that most users have enjoyed a long-term relationship with their supplier, ranging from two years, to over 20 years with an average of 11 years nine months.

The average time taken to reach a decision about a purchase was four months, with a maximum of twelve months.

B. PURCHASING TRENDS AND INFLUENCES

1. TANGIBLE PRODUCT REQUIREMENTS

- o Exhibits S3-10 to S3-13 compare the relative importance of acquisition parameters and current vendors' performance against that 'target'.

EXHIBIT S3-9

Average time taken

o Length of business relationship between user and vendor:

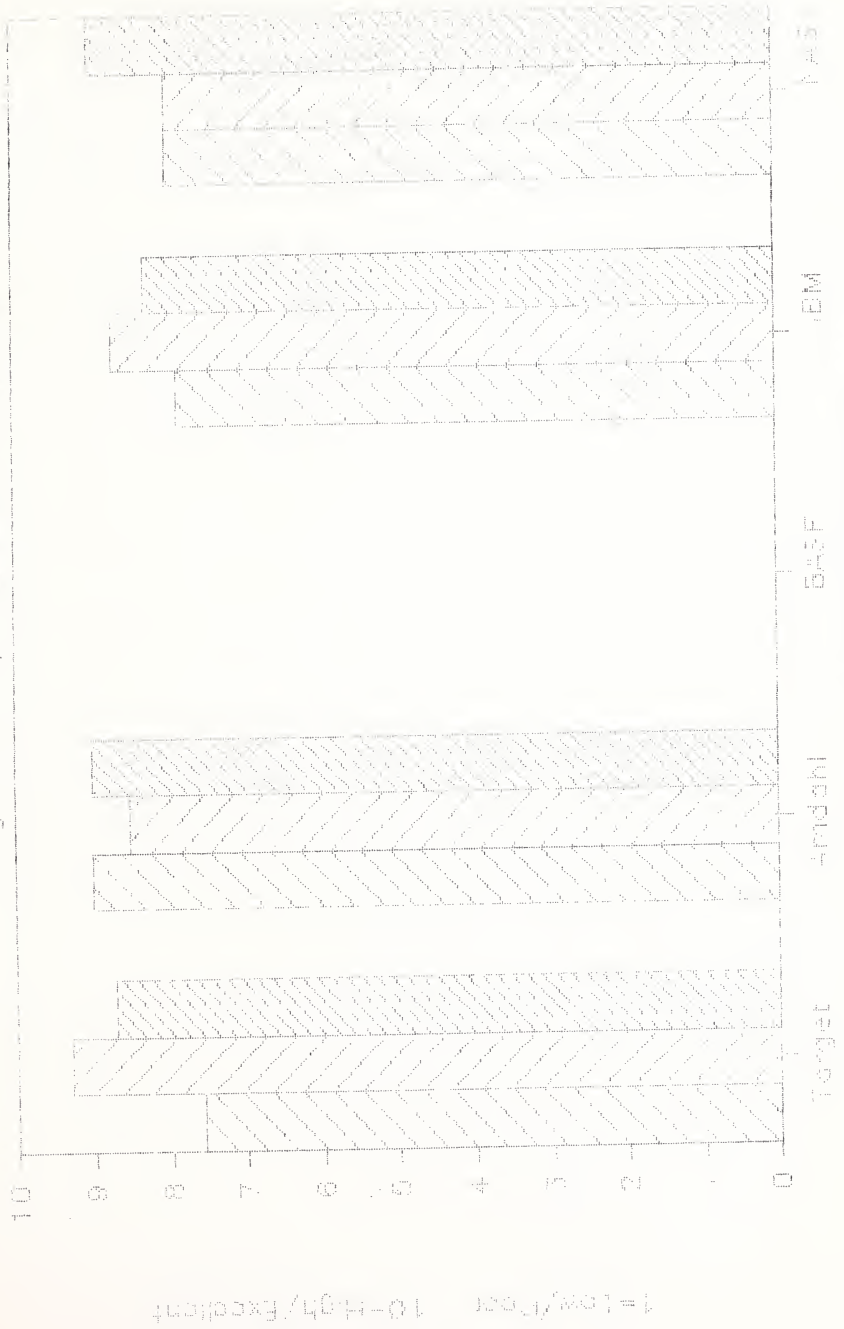
141 months

o To make a purchasing decision:

4 months

Exhibit 93-10

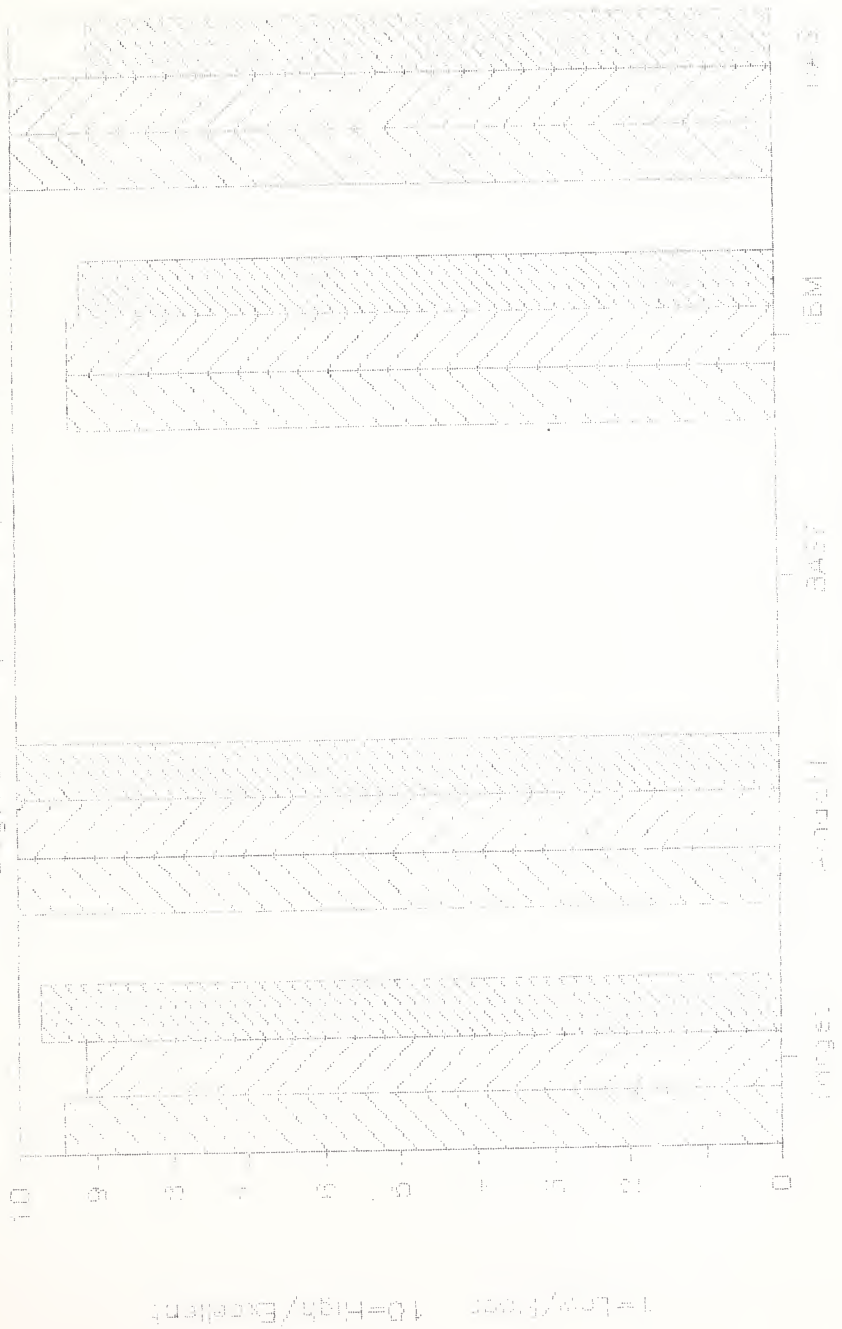
Degree of Importance/Performance



Product Results
Tangible Performance
[27] Price
[28] Performance
[29] Price/Performance

Exhibit 33-1

Degree of Importance/Performance



1=Low/Poor 10=High/Excellent

Exhibit S3-12

Degree of Importation Performance

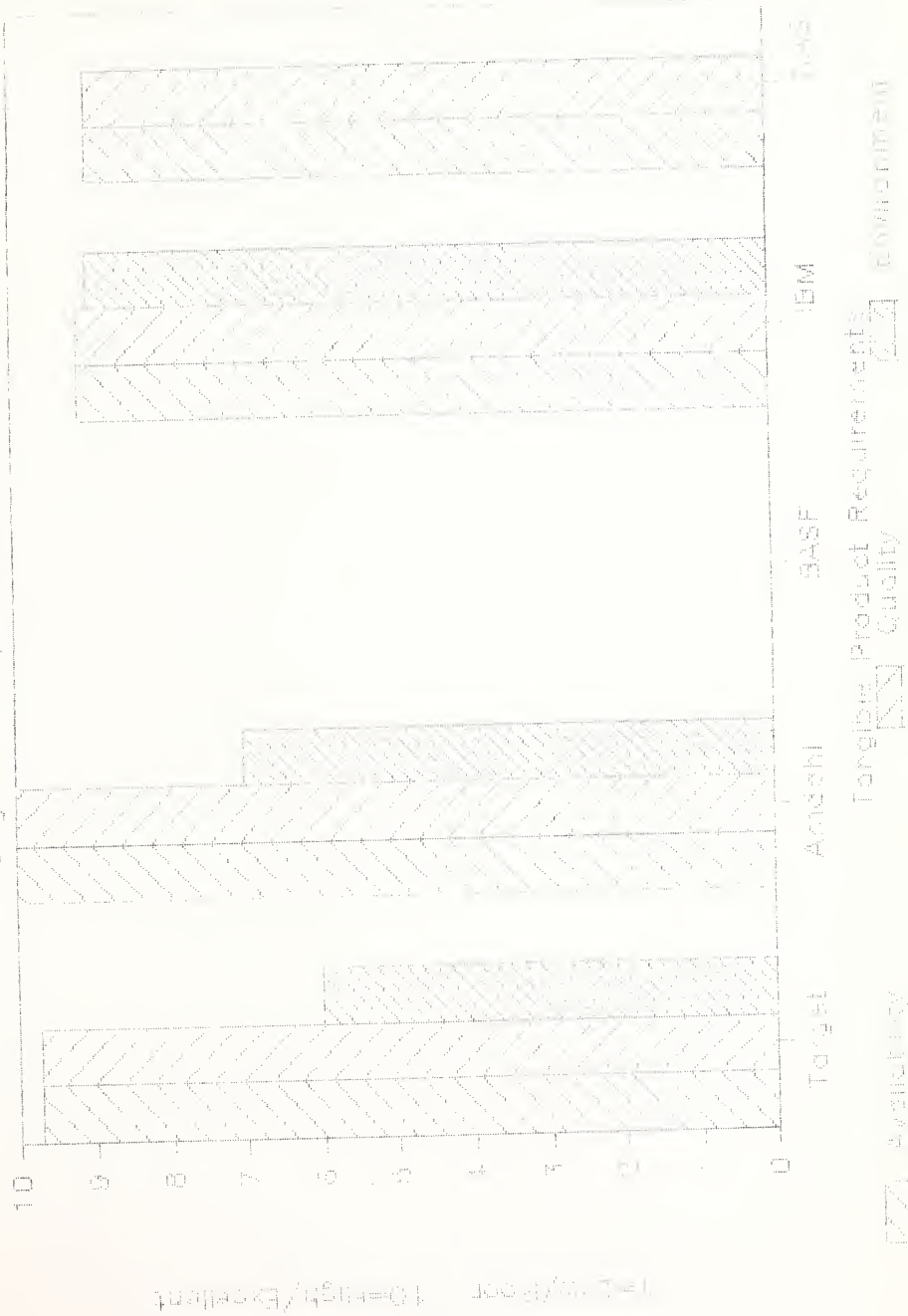
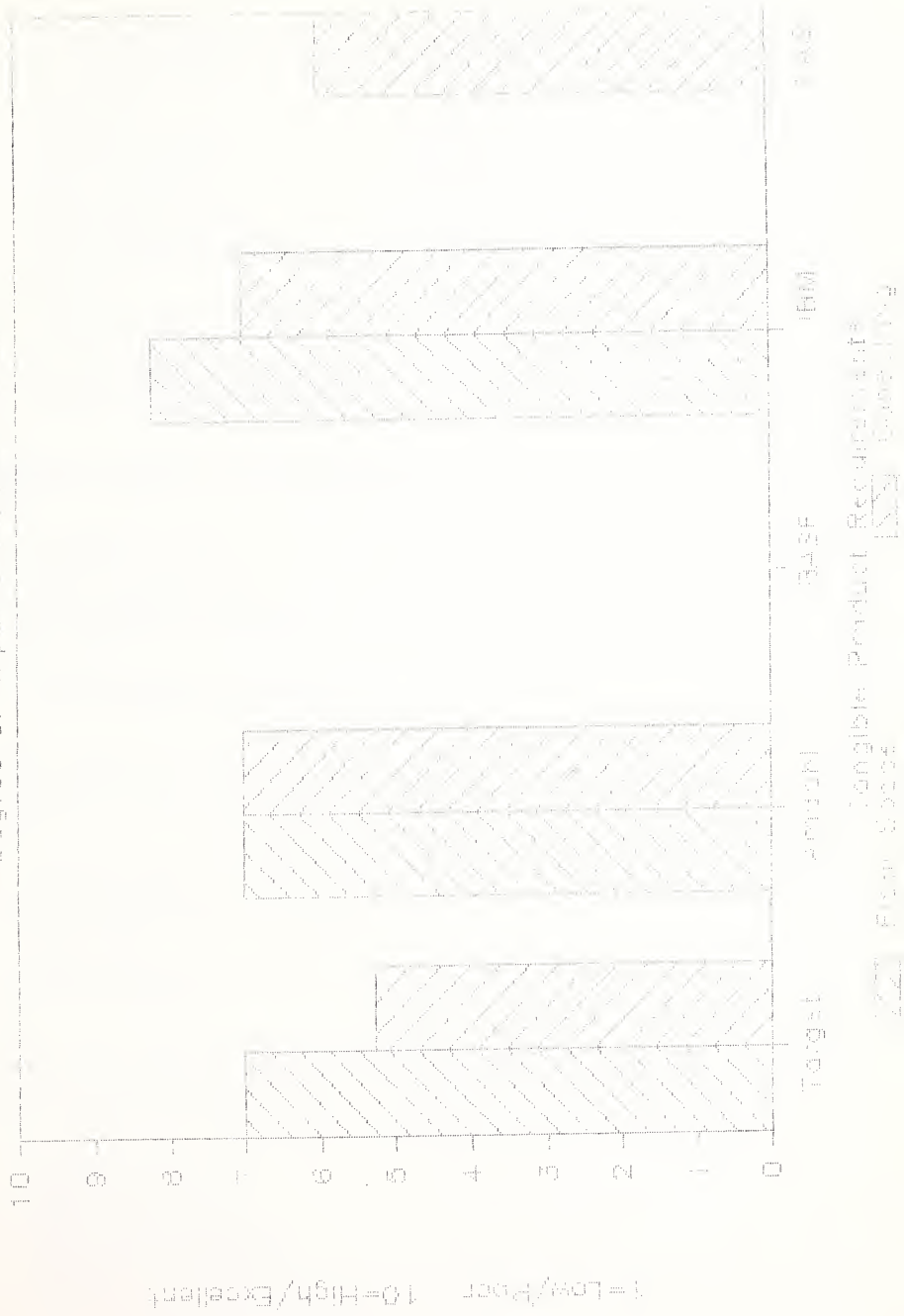


Exhibit 53-13

Degree of Importance, Performance



o In order of 'target' importance, the key parameters are:

- . Reliability (9.7)
- . Availability (9.7)
- . Quality (9.7)
- . Compatibility (9.4)
- . Performance (9.3)
- . Upgradeability (9.1)
- . Price/performance (8.7)
- . Price (7.6)
- . Floor space (7.0)
- . Environment (6.0)
- . Consulting assistance (5.3)

o NAS performed better than target in:

- . Compatibility
- . Upgradeability
- . Price/performance
- . Price
- . Consulting assistance

o In four of the top five criteria, NAS was rated below both IBM and Amdahl, and also below target:

- . Reliability
- . Availability
- . Quality
- . Performance

o Amdahl performed better than or equal to NAS in all factors. NAS outperformed IBM in:

- . Compatibility
- . Upgradeability
- . Price/Performance
- . Price

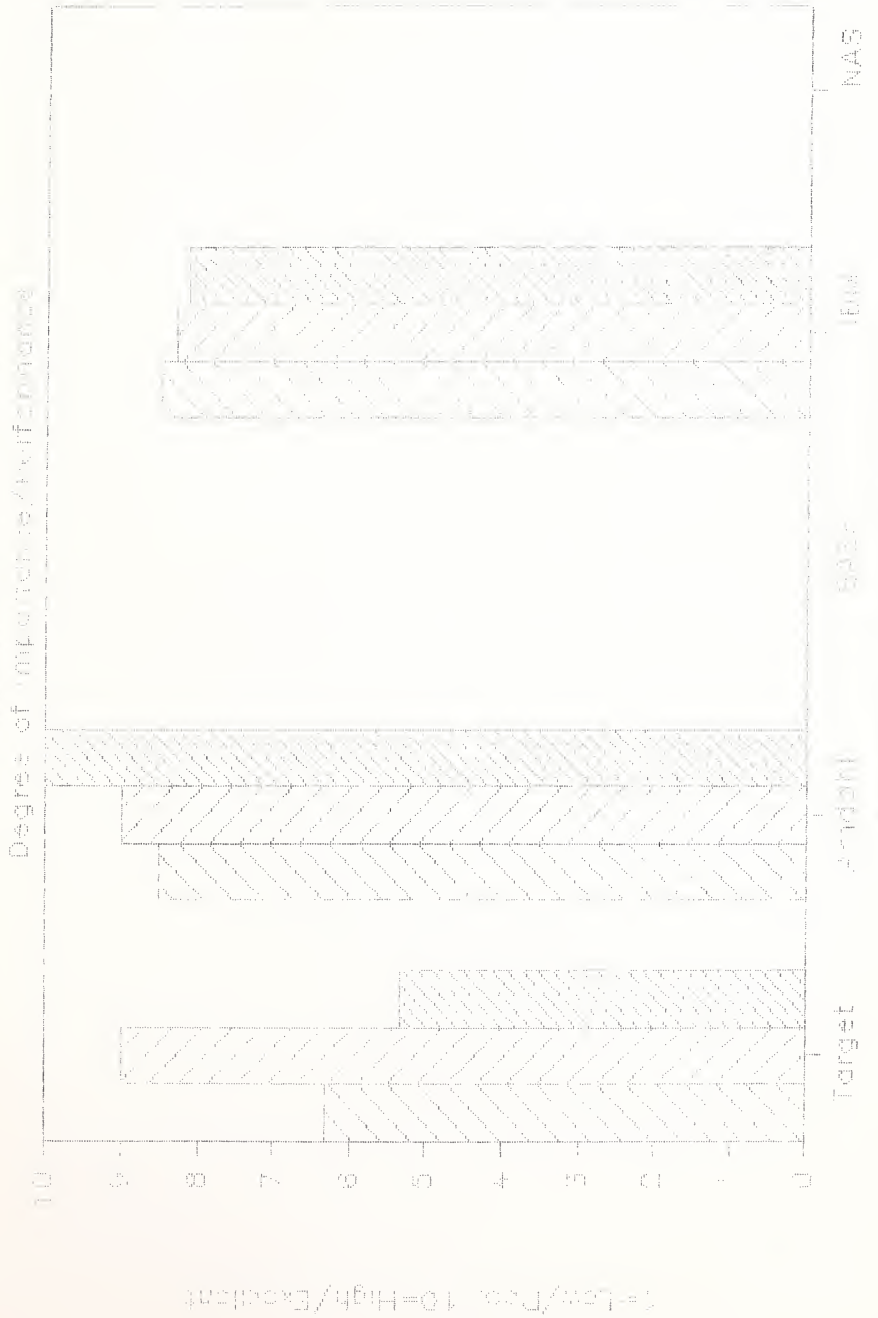
2. TANGIBLE SUPPORT REQUIREMENTS

- o Exhibit S3-14 shows the importance of support requirements and compares vendor performance against this target.
 - In order of importance, the three factors are:
 - . Software maintenance (9.0)
 - . Hardware support (6.3)
 - . System consultancy (5.3)
 - The NAS respondent did not comment on performance in this area.
 - Amdahl were rated excellent in the most important criterion of software maintenance.
 - Both IBM and Amdahl performed better than target for hardware support and system consultancy.
 - IBM fell below target for software maintenance.

3. TANGIBLE COMPANY REQUIREMENTS

- o Exhibits S3-15 to S3-17 compare the relative importance to users of certain vendor company factors and measure vendor performance against those targets.
 - In order of importance the factors are:
 - Post sales effort (8.1)
 - . Service organisation (7.8)
 - . Stability (7.7)
 - . Financial condition (7.7)
 - . Location (6.7)
 - . Size of company (6.5)
 - . Range of products (5.2)
 - . Pre sales effort (3.0)

Exhibit 33-4



Target Support Required (10=High/Excellent, 10=Low/Good)

Exhibit S3-18

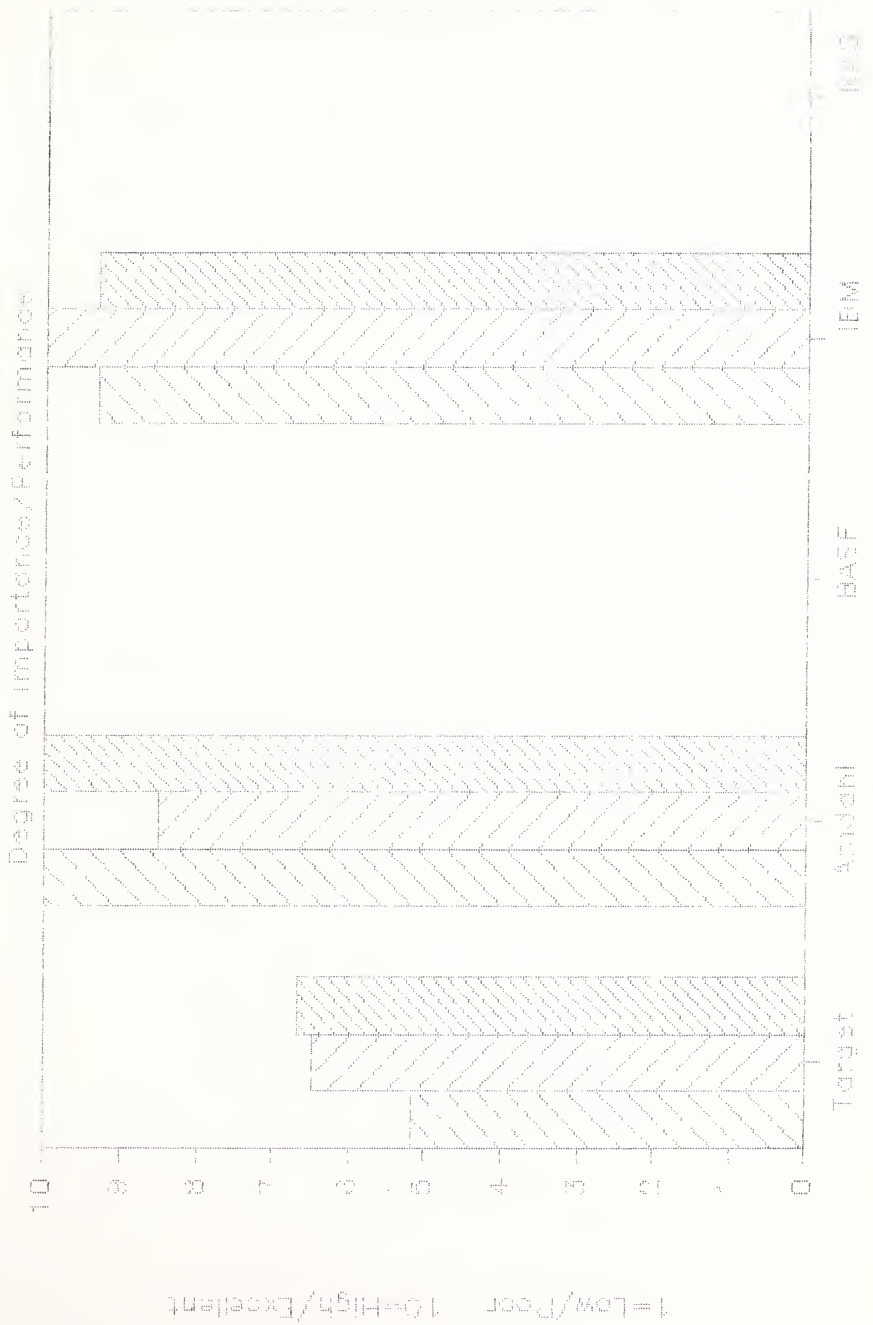
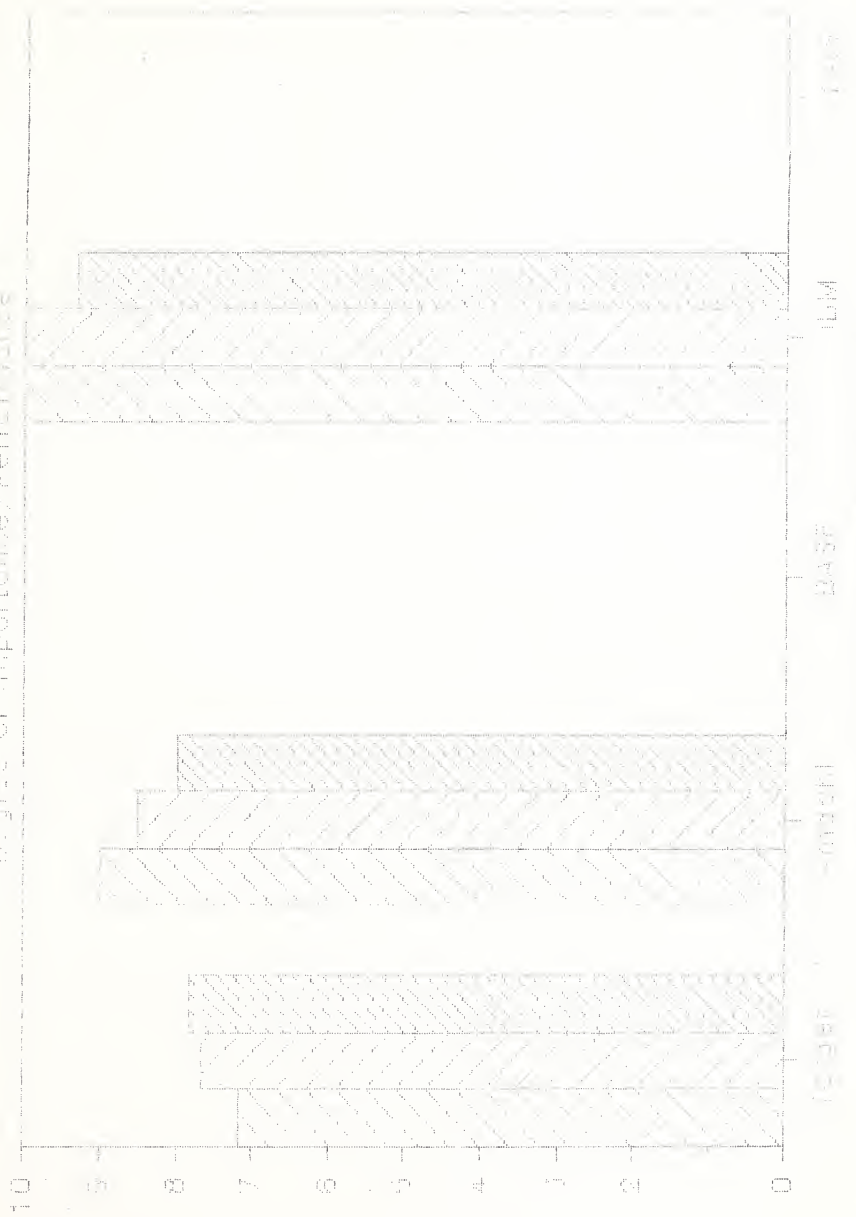


Exhibit 83-13

Degree of Importance/Performance



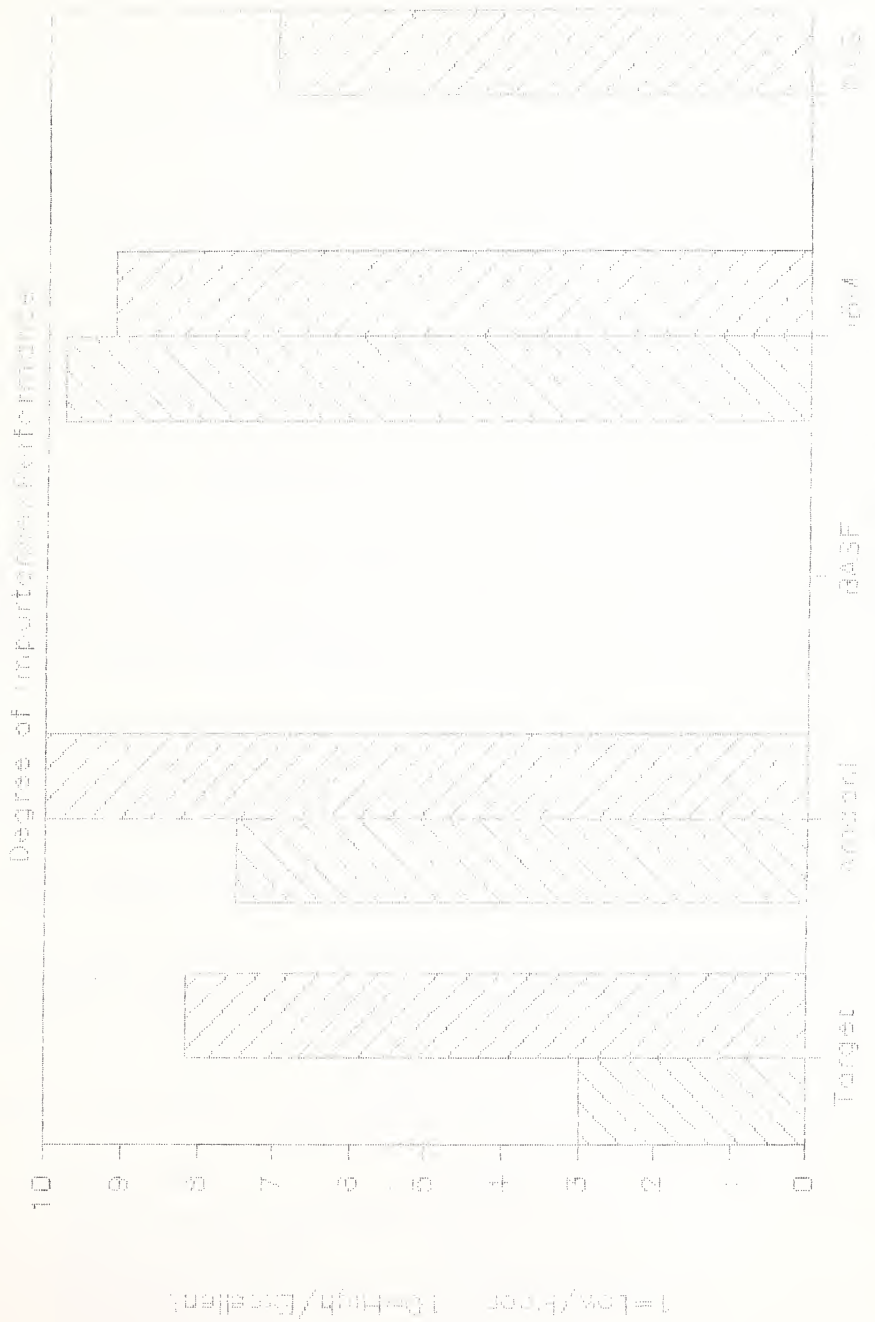
1=Low/Poor 10=High/Excellent

Approximate Evaluation

Tangible Component: Rect. no. 1000

1985-1988: 1985-1988

Exhibit S3-13



Pre-Values Group
Variable Component Requirements
Instructional Eff.

- o NAS were rated only for the most important factor, post sales effort and rated below target and well below both Amdahl and IBM.
- Both IBM and Amdahl performed better than target in all criteria.
- IBM rated very highly in all criteria, being regarded as excellent in company size, financial condition and stability.
- Amdahl was rated excellent in product range, company, location and post sales effort.

4. INTANGIBLE PRODUCT REQUIREMENTS

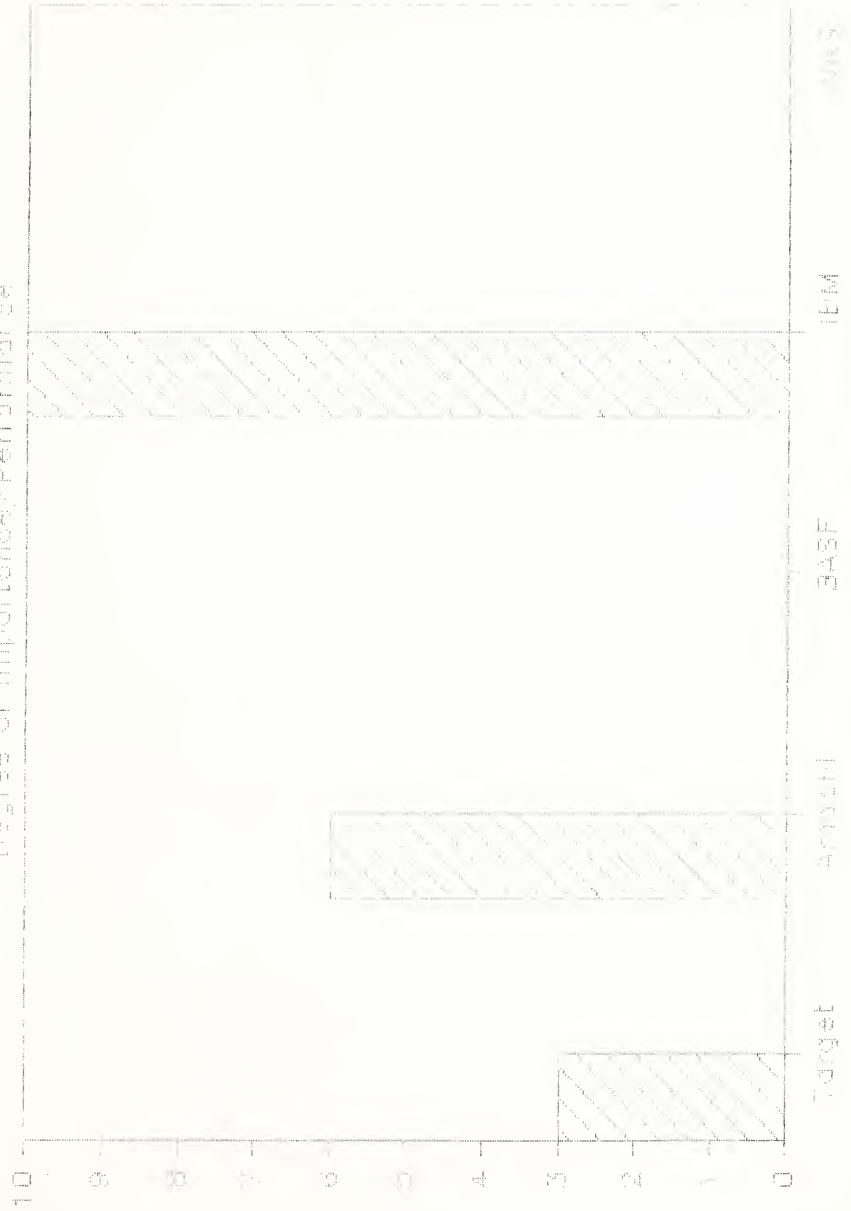
- o None of the respondents considered the effect of the equipment on customers to be at all important. Its effect on employees is also considered to be of only marginal importance (rating 3 on a scale of 1-10).
- o IBM were rated excellent for the effect on employees. Amdahl were less highly regarded than IBM, but still performed better than target (Exhibit S3-18).

5. INTANGIBLE COMPANY REQUIREMENTS

- o Exhibits G3-19 to G3-22 illustrate the relative importance of intangible company attributes and compare them to user ratings.
- o In order of importance, the factors are:
 - . Credibility (9.5)
 - . System support personnel (9.3)
 - . Support personnel (9.1)
 - . Salesmen (8.9)
 - . Communications (8.7)
 - . Least amount of bother (8.4)
 - . Reputation (8.3)

Exhibit S3-18

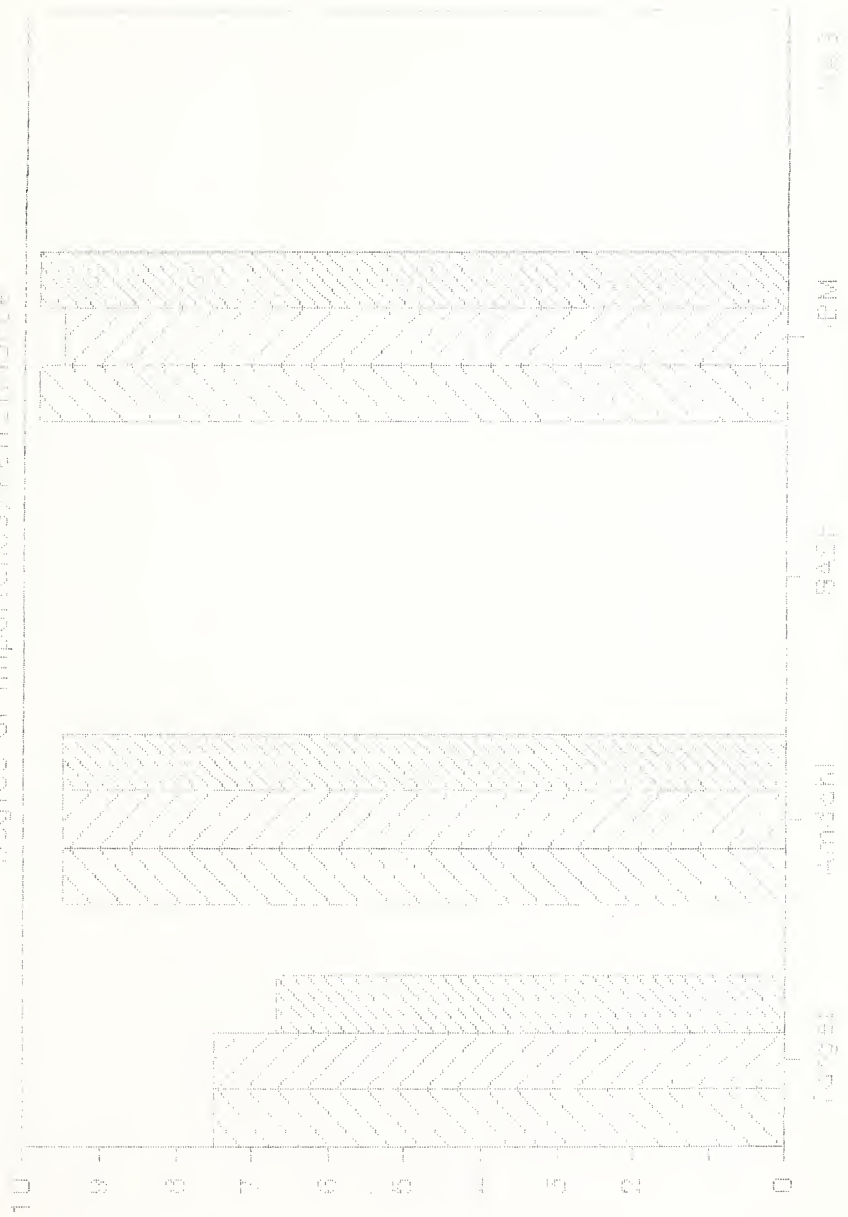
Degrees of Importance/Performance



[22] effect on employees Indigible Product Requirements [23] Effect on Customers

Exhibit 88-2

Degree of importance/Performance

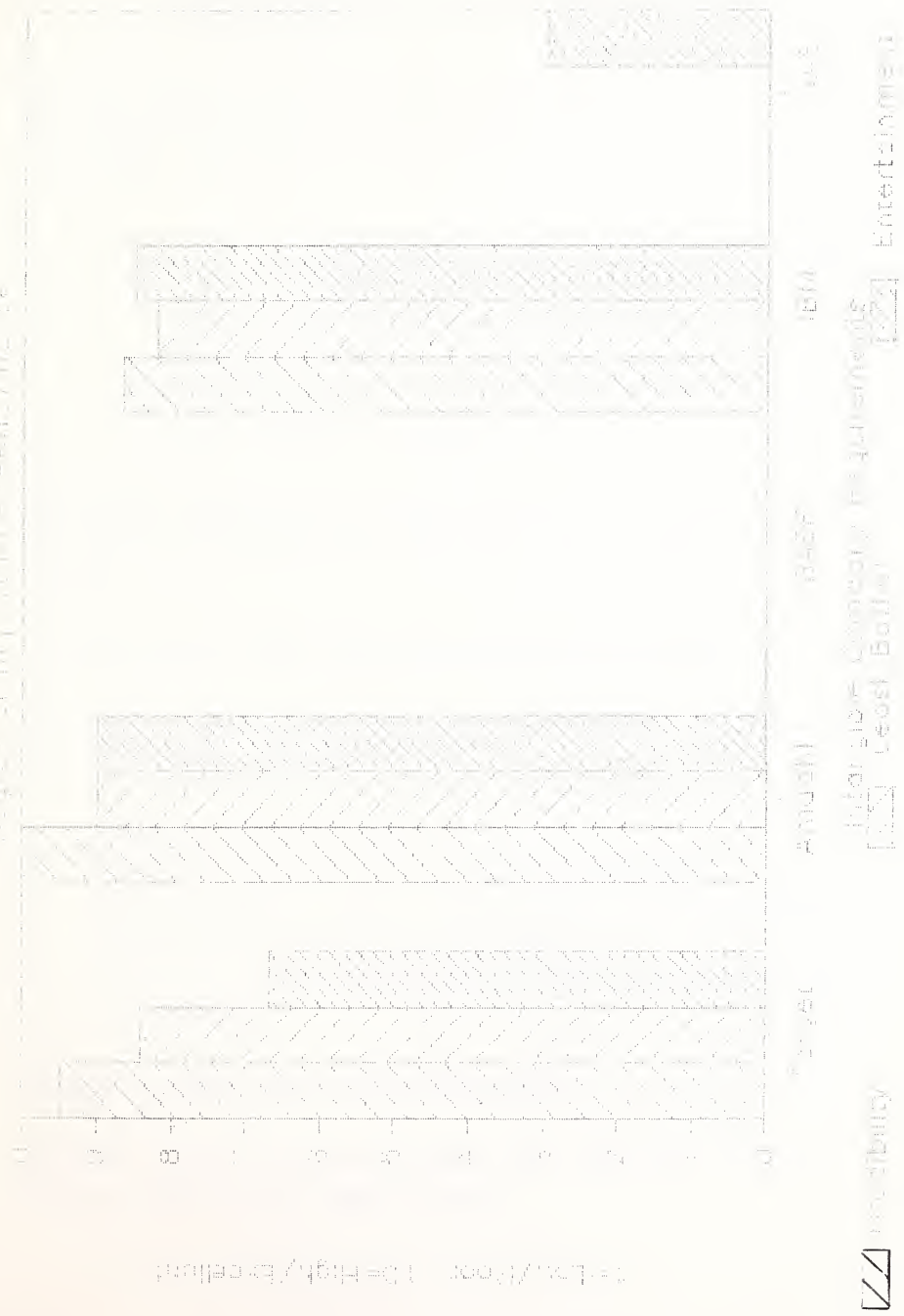


1=Low/Price 10=High/Excellence

intermediate secondary requirements
visibility
advertising

Exhibit 33-22

Degree of information confidentiality



- . Executive relationship (7.9)
- . Image (7.5)
- . Visibility (7.5)
- . Advertising (6.7)
- . Entertainment (6.7)

- o NAS was rated on only two factors, executive relationships and salesmen. On both counts, the rating was excellent.

- . IBM was rated better than target on all counts except:

- . System support personnel (9.0 v 9.3)
- . Communications (8.4 v 8.7)
- . Credibility (8.7 v 9.5)
- . Least amount of bother (8.2 v 8.4)

- o Amdahl was rated excellent for credibility, reputation and executive relationships; and rated above target on all counts.

6. THE ROLE OF THE DATA PROCESSING BUYER/INFLUENCER

- o No single role was mentioned more than once. Those that were mentioned include:

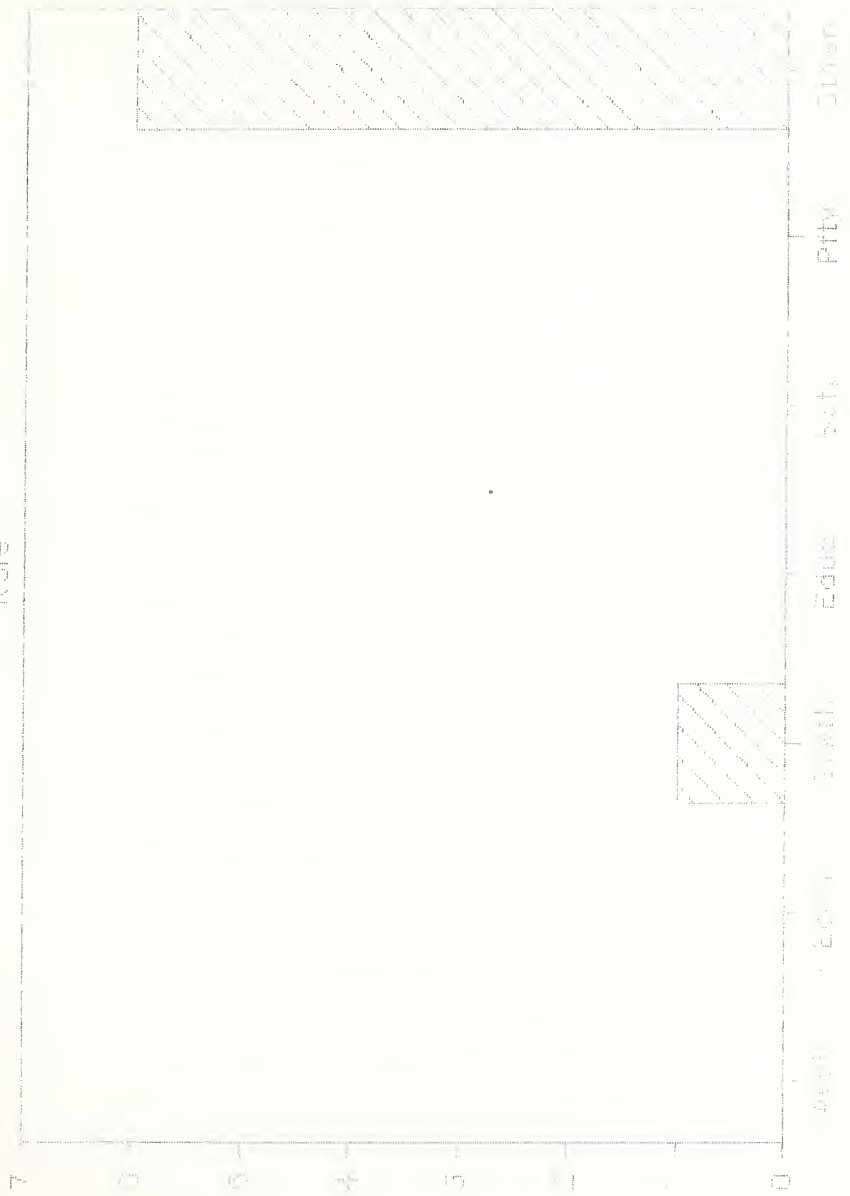
- Ensuring sound growth;
- Improving productivity in the DP Department;
- Supervising the smooth introduction of LANs and PCs;
- Finding and evaluating new products;
- Controlling the development of office automation in the company.

7. EXTERNAL ISSUES AND FUTURE REQUIREMENTS

- o External issues were not regarded as important, and no specific mention was made of them.

Exhibit 53-23

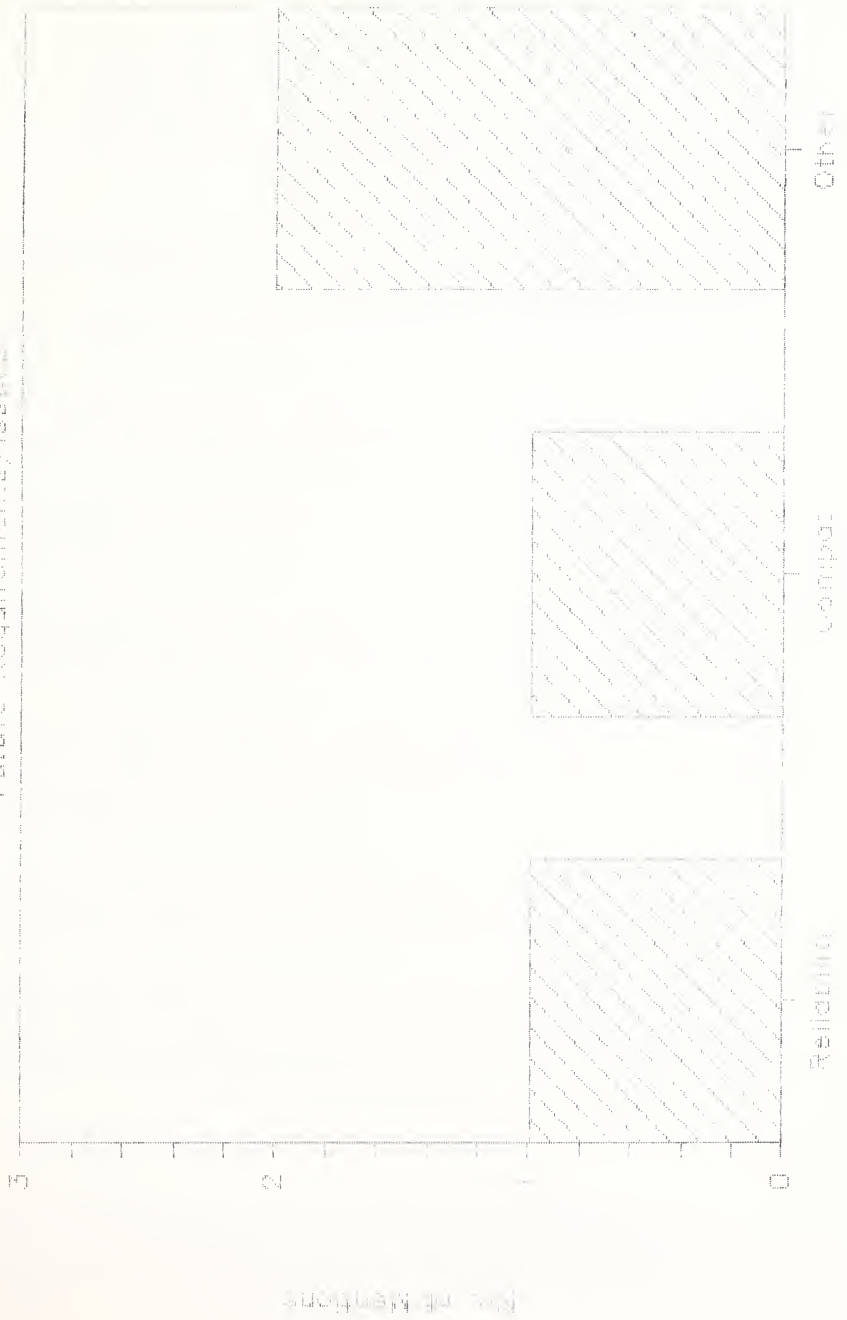
Role



No. of Mentions

Exhibit S3-2E

Future Requirements/Issues



- o In terms of future requirements, the factors mentioned were:

- . Reliability
- . Compatibility
- . More consultancy and advice on future developments

C. ACQUISITION PROCESS

1. PERSONNEL INVOLVED IN DATA PROCESSING PROCUREMENT

- o Exhibits S3-26 and S3-27 summarise the numbers and levels of personnel involved in the procurement process.
 - On average, 5.9 people are involved in the purchase decision.
 - The Data Processing Manager is the most frequently concerned with a team involved in 42.8% of cases.
- o The need for new equipment is most often identified by the D P Manager, but in two cases out of the seven, it was the user department.
 - In five out of seven cases, the acquisition of new equipment formed part of a formal project plan.
- o The D P Manager most often makes the recommendation. The final decision is taken by a director in half of the cases and the board in the other half.

2. CONSULTANTS AND POLICIES

- o Most respondents (five out of seven) said that they did not have a set purchasing policy. The policies which did exist were:
 - To buy only IBM CPUs
 - Not to change vendors so long as no problems arise

Exhibit 33-26

Purchasing Decision

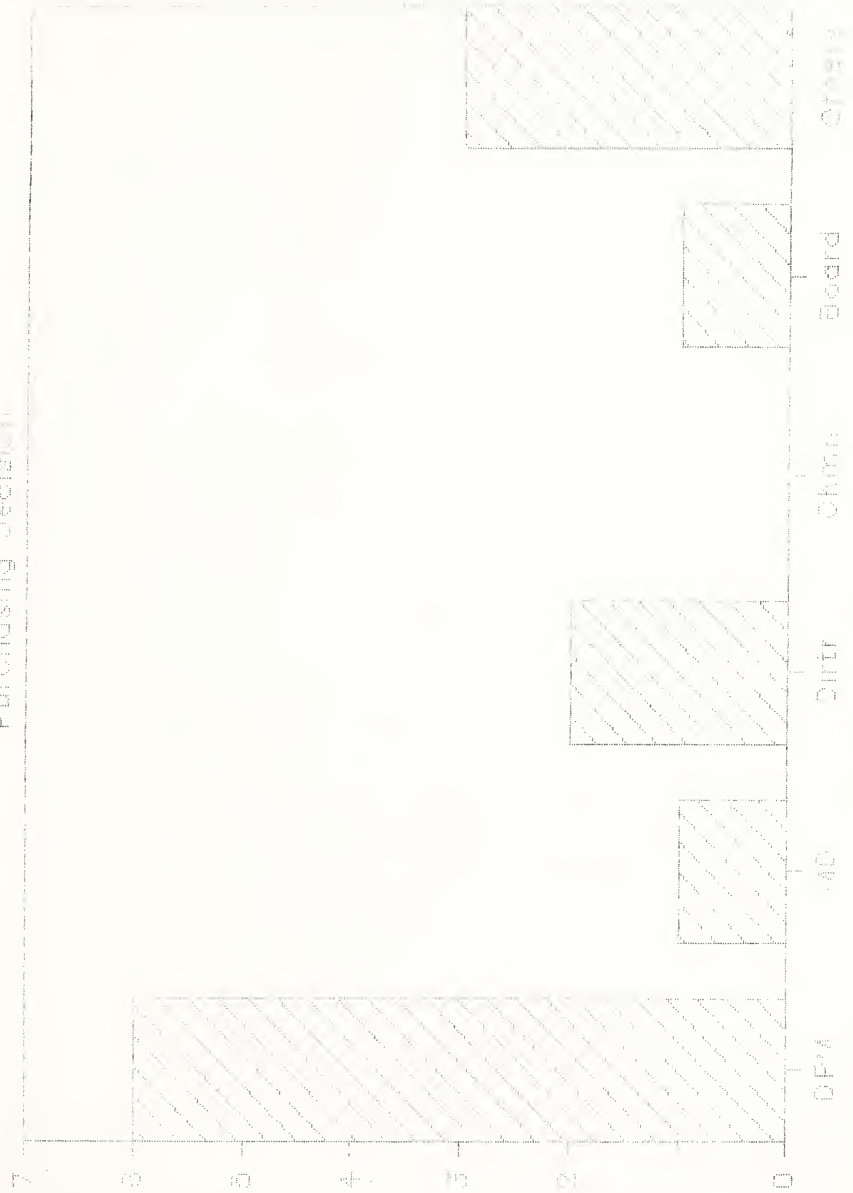


Fig. 27 Millions

Level of People Involved

Exhibit S3-28 illustrates the policy situation.

- o None of the respondents made use of consultants in the acquisition process.

D. MARKET CHARACTERISTICS

1. PROPENSITY TO CHANGE VENDORS

- o Only one user was unwilling to consider changing vendors, except possibly in the distant future. All the others were prepared to consider changing for a number of reasons:
 - Cost
 - Reliability and availability
 - Change in user requirements creating the necessity
 - To make use of new products.

(Exhibit S3-30)

2. WHAT USERS SAY IT WOULD TAKE TO BE SOLD ON ANOTHER VENDOR

- o Exhibit S3-31 shows that the most important factors taken into considerations are:
 - Improvement in price/performance
 - Improved service
 - Reliability/availability
 - Compatibility
 - Availability of new products or techniques
 - Failure by the existing vendor to fulfil user needs
 - To meet specific user needs.

3. USERS' CONSIDERATIONS OF BUYING FROM PCM'S AND LARGE SYSTEMS VENDORS

- o Exhibit S3-32 shows that all users would consider buying from this group. The conditions which have to be met are:

Exhibit S3--2a

Get Procurement Policies

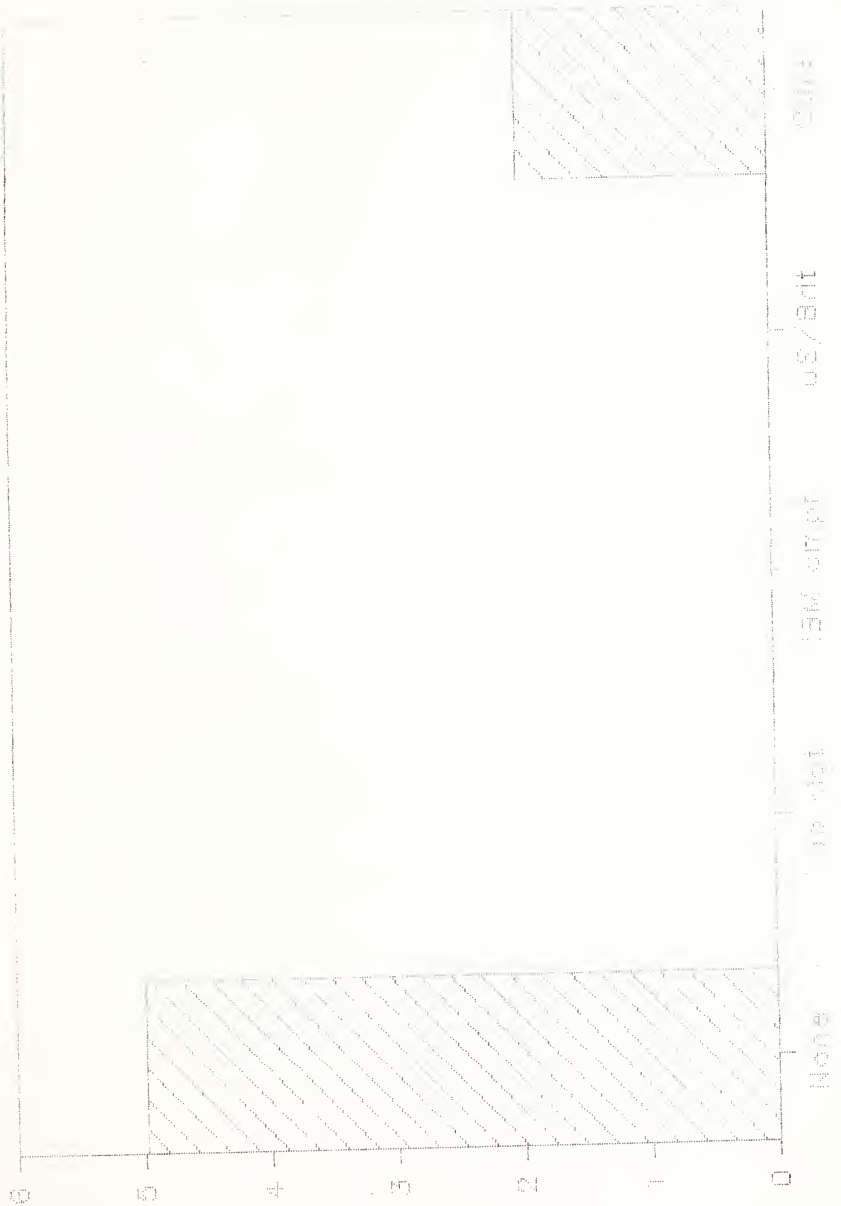


Exhibit 83-29

Consultants used in Procurement

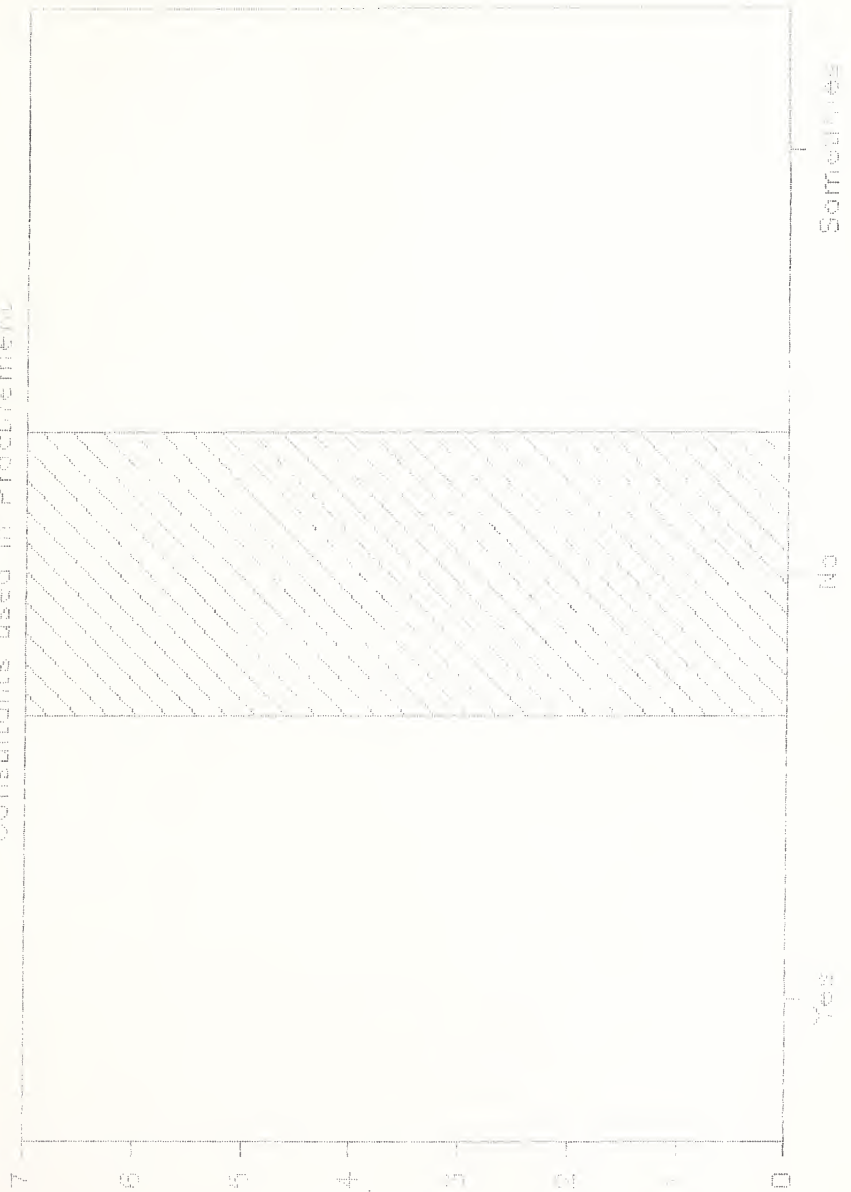


Exhibit 93-30

Propensity to Change Versions

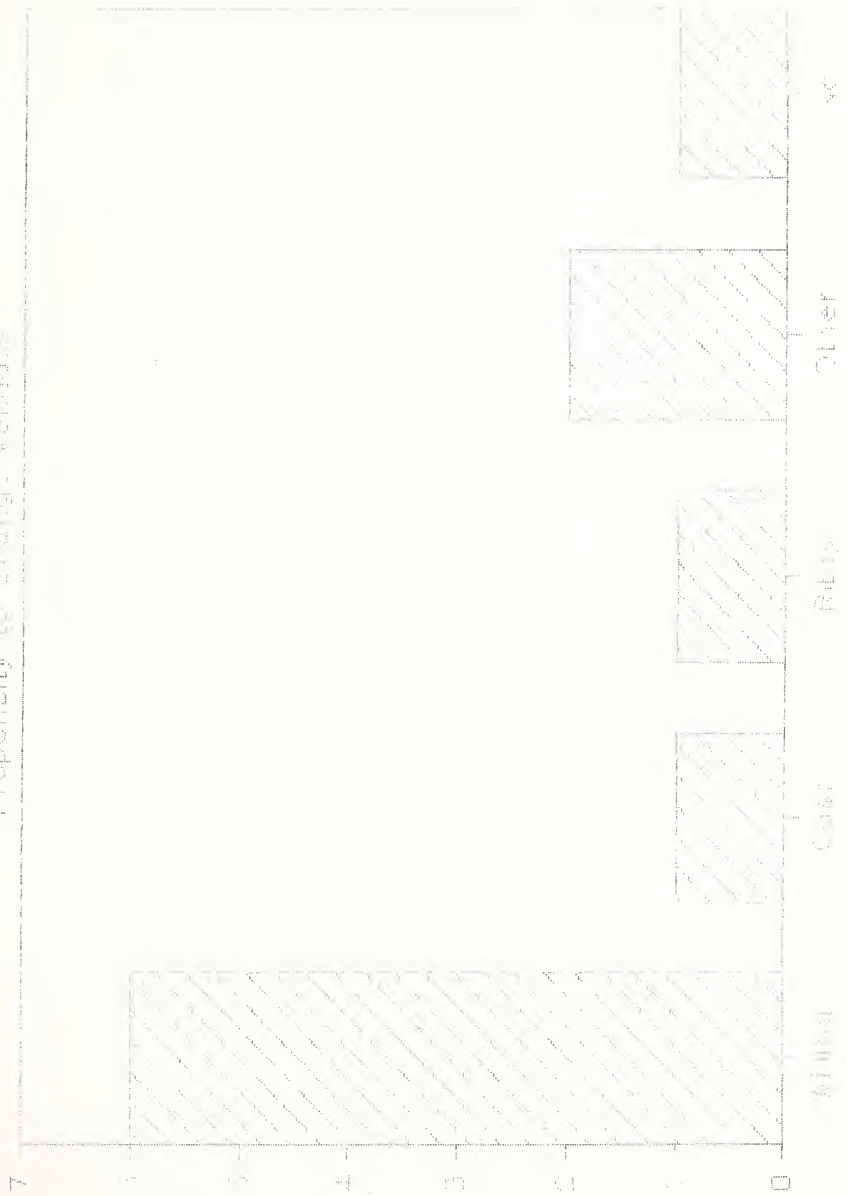


Exhibit 33-51
Requirements to Change Vendor

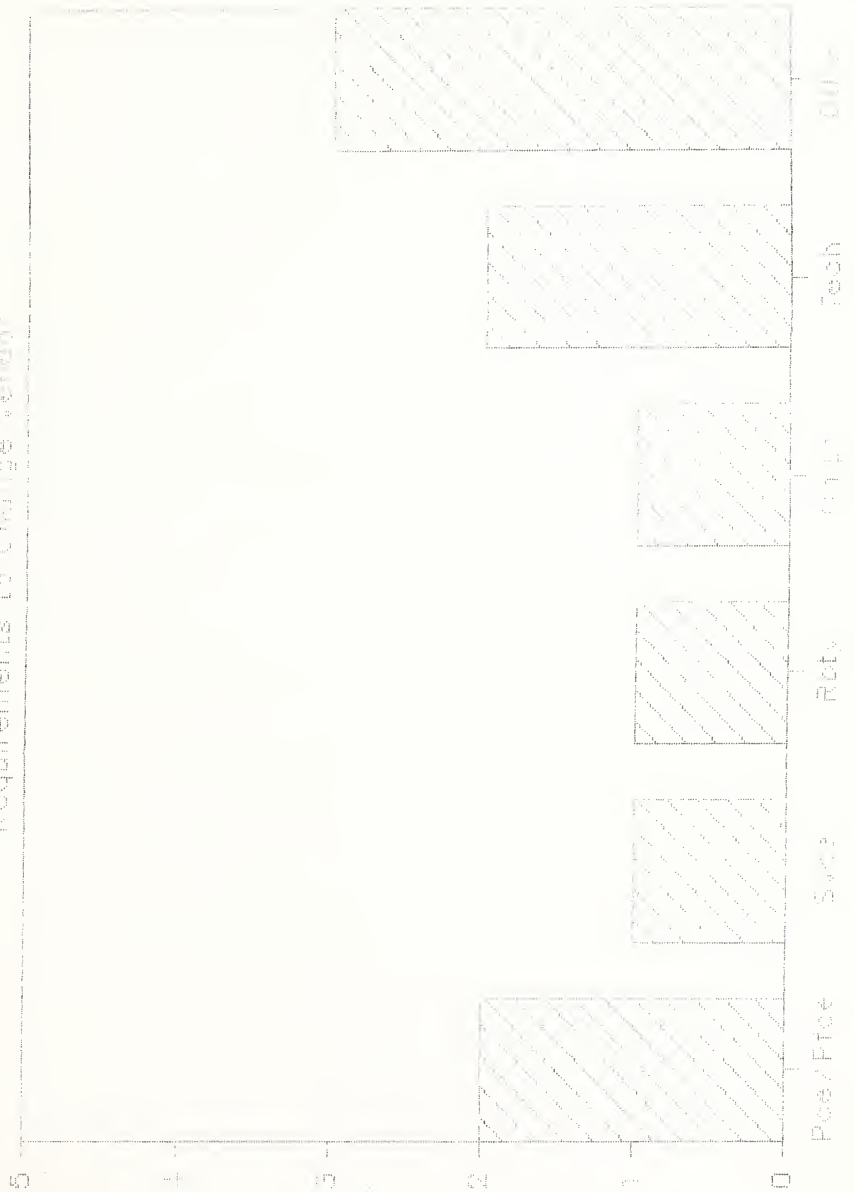
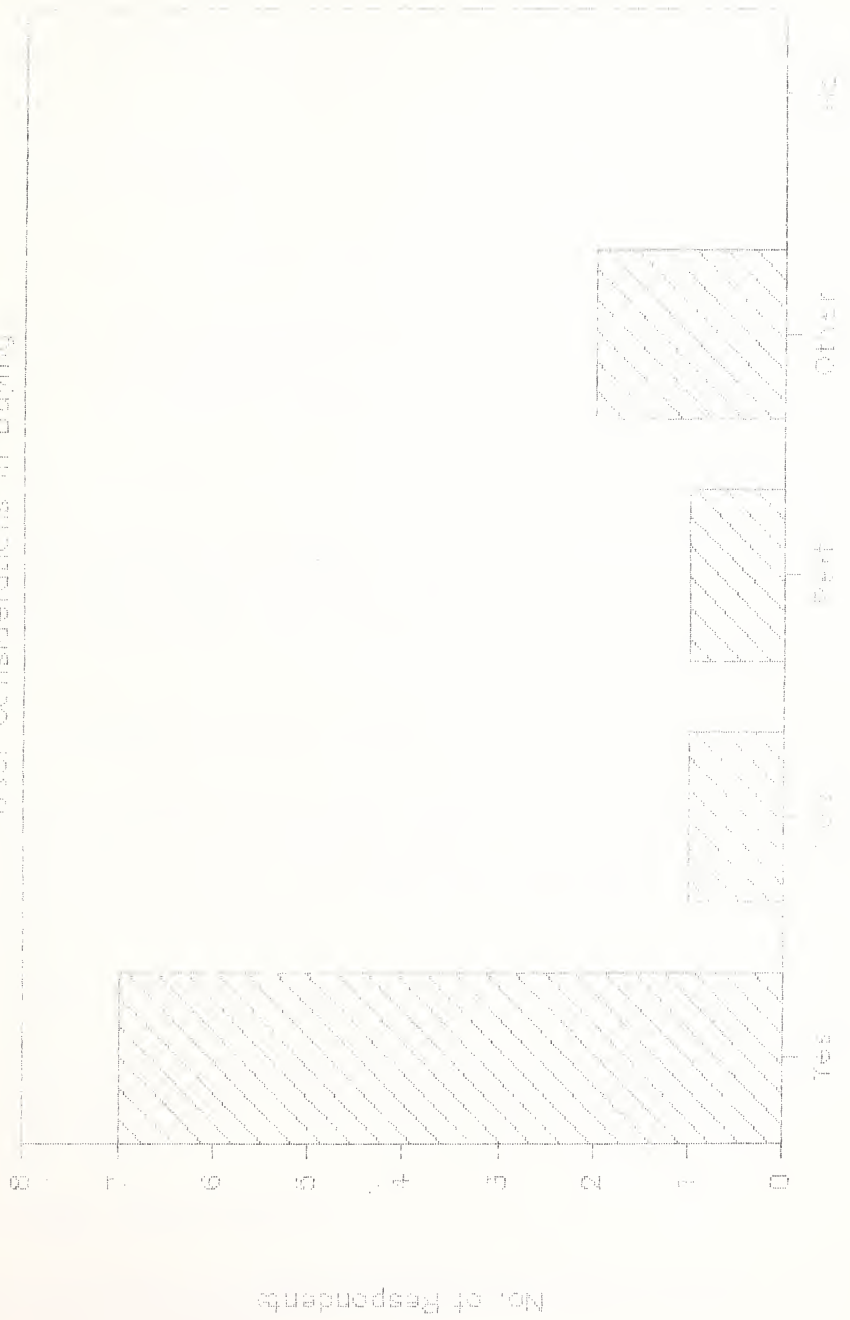


Exhibit 93-32
User Considerations in Buying



- The provision of a complete application solution
- Improved price/performance
- Improved support and service
- Improved cost effectiveness

E. PERCEPTIONS OF VENDORS

1. PRODUCT RELIABILITY (EXHIBIT S3-33)

- o NAS's reliability is very badly perceived, rating lowest of all vendors. This perception is in line with the fact that NAS users rate reliability below target. (Exhibit S3-11)

2. PRICE (EXHIBIT S3-34)

- o NAS is well regarded in terms of price, ranking second to IBM. In the ratings of actual users, NAS was rated marginally better than IBM, better than target but behind Amdahl.

3. PRODUCT PERFORMANCE (EXHIBIT S3-35)

- o NAS is rated second only to IBM, significantly ahead of BASF and Siemens. This perception contrasts with the ratings given by vendors' users who rated NAS poor on performance. (Exhibit S3-10)

4. PRODUCT RANGE (EXHIBIT S3-36)

- o Perception of NAS is only moderate, rating below IBM and Amdahl, marginally better than Siemens and significantly better than BASF.

5. COMPANY IMAGE (EXHIBIT S3-37)

- o Again NAS is rated below IBM and Amdahl but significantly ahead of BASF and Siemens.

Exhibit 53-53

Perceptions : Product Recyclable

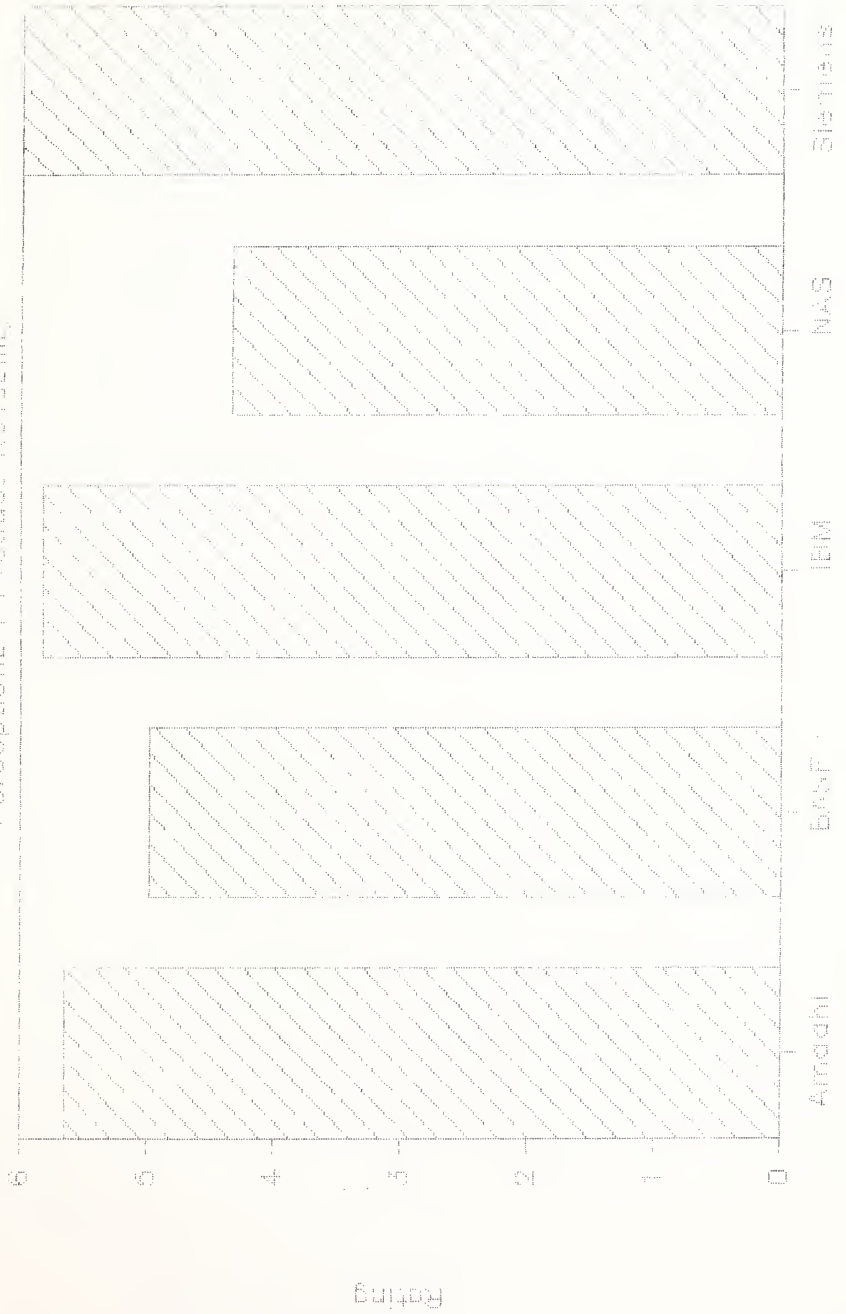


Exhibit 53-36

Percentage of

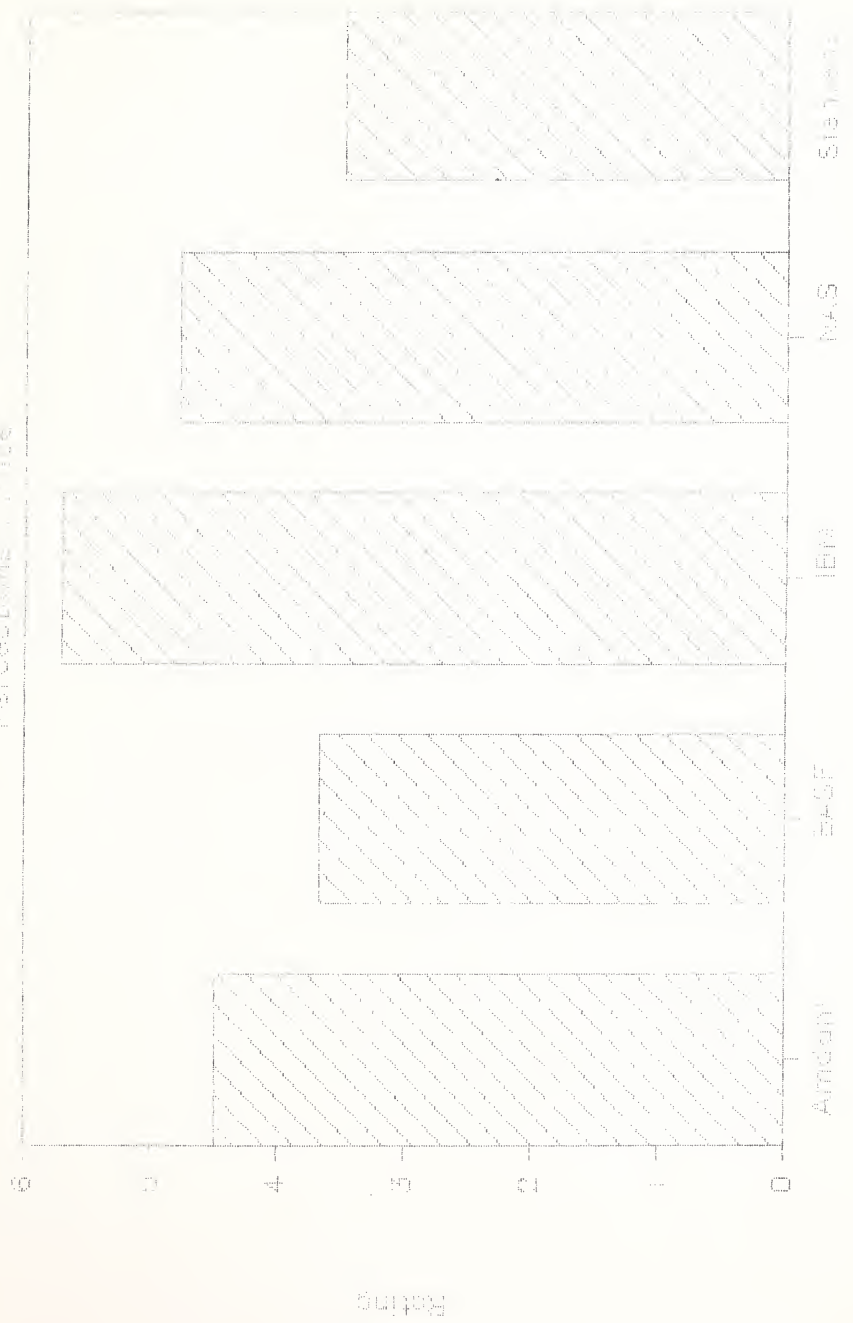


Exhibit S3-3E

Perceptions : Product Performance

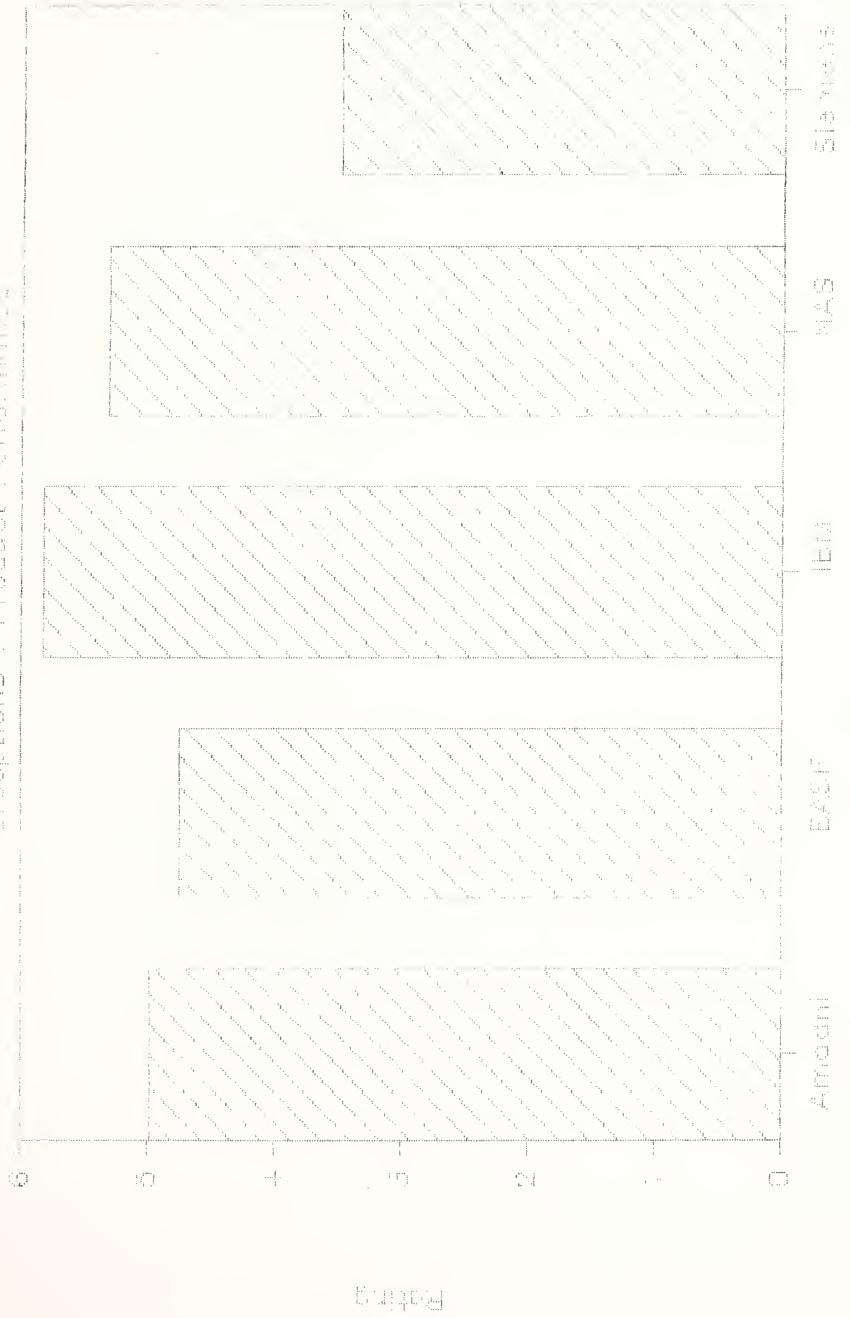


Exhibit S3-36

Perceptions Product Range

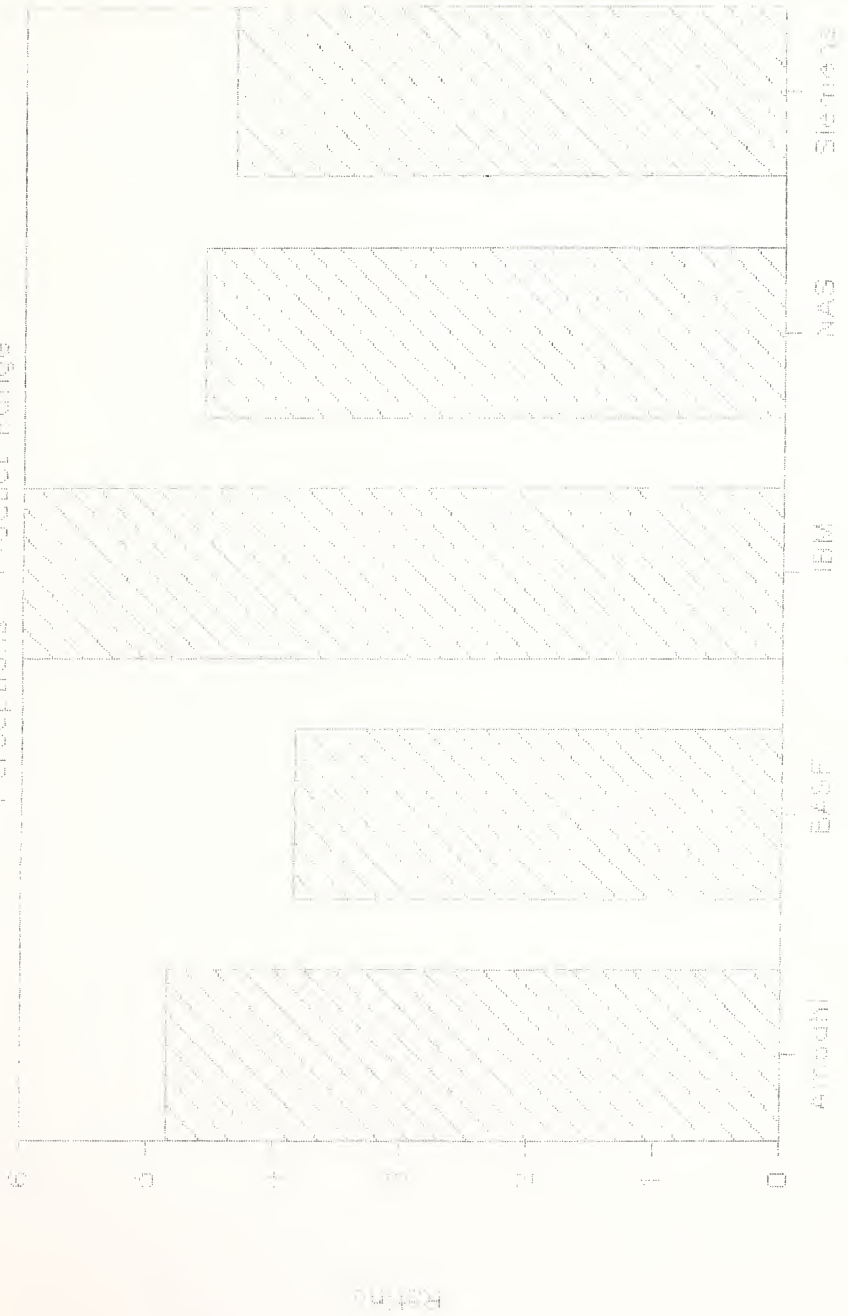
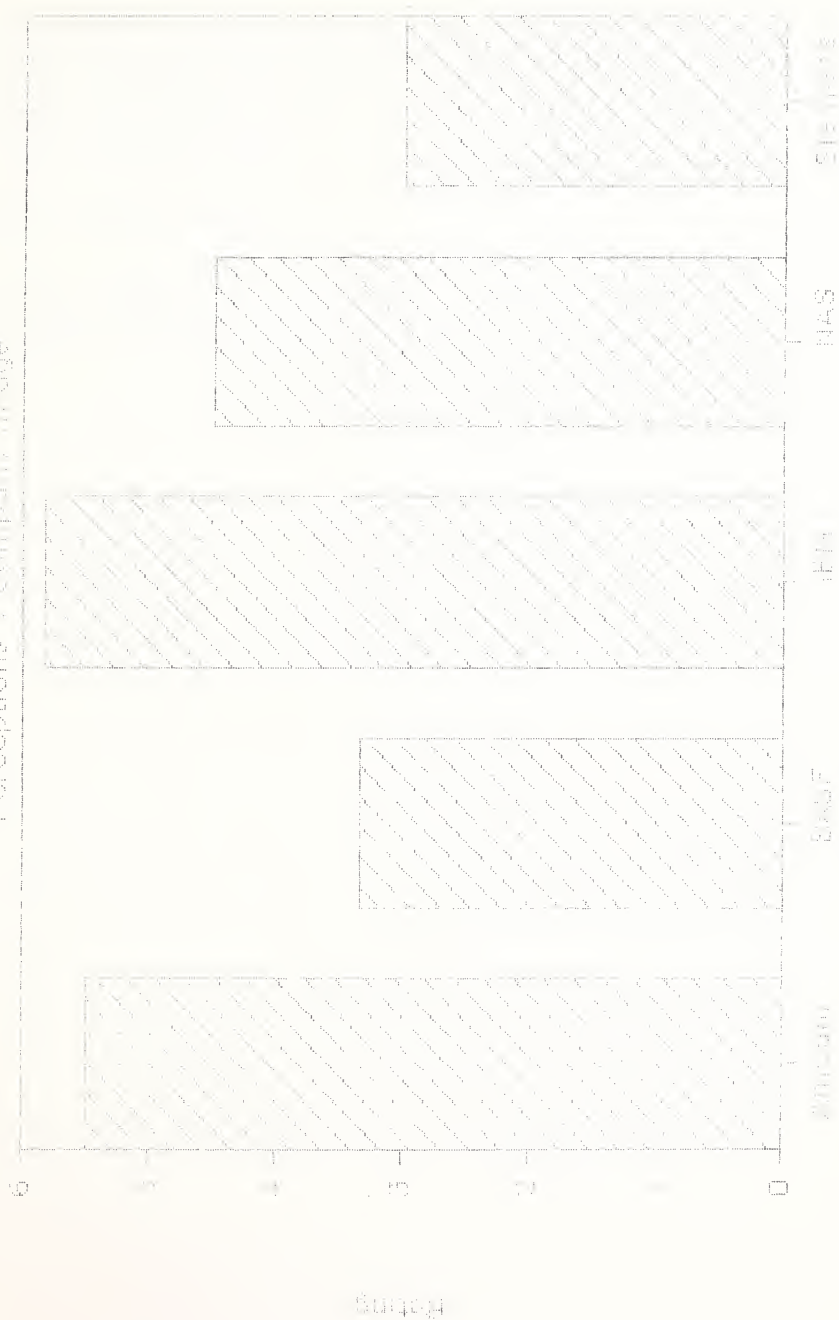


Exhibit 53 --
Perceptions of Company Image



6. MARKETING STRENGTH (EXHIBIT S3I-38)

- o IBM is regarded as totally dominating the market, rating a maximum 6. NAS again trails behind Amdahl, but leads BASF and Siemens. The latter, with a rating of only 2.5 are seen to be extremely weak.

7. PERSONNEL (EXHIBIT S3-39)

- o This is one of NAS's strongest points, rating a close second to IBM and ahead of all the other vendors.

Exhibit 33-38

Perceptions of Marketing Strength

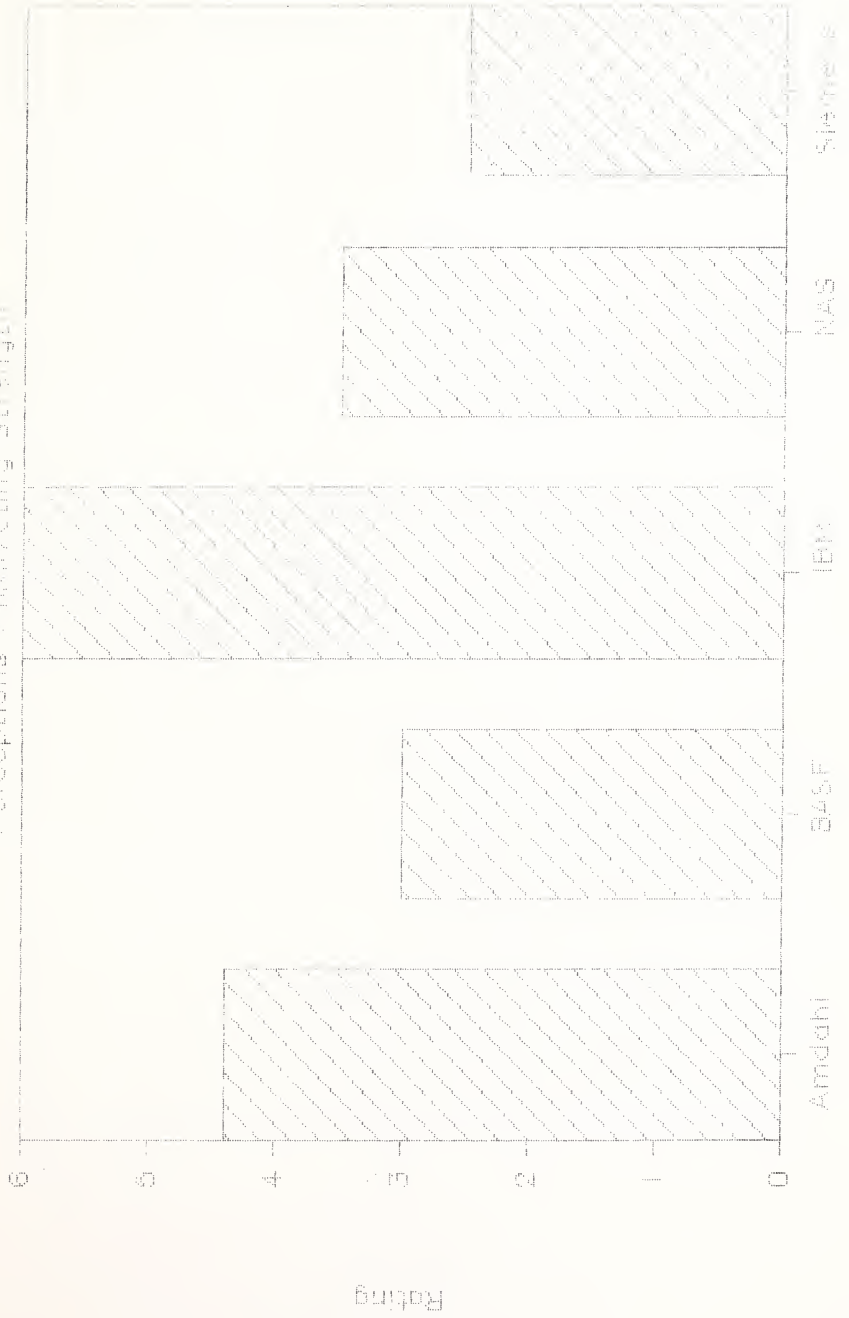


Exhibit S3-59

Perceptions : Percepciones

